

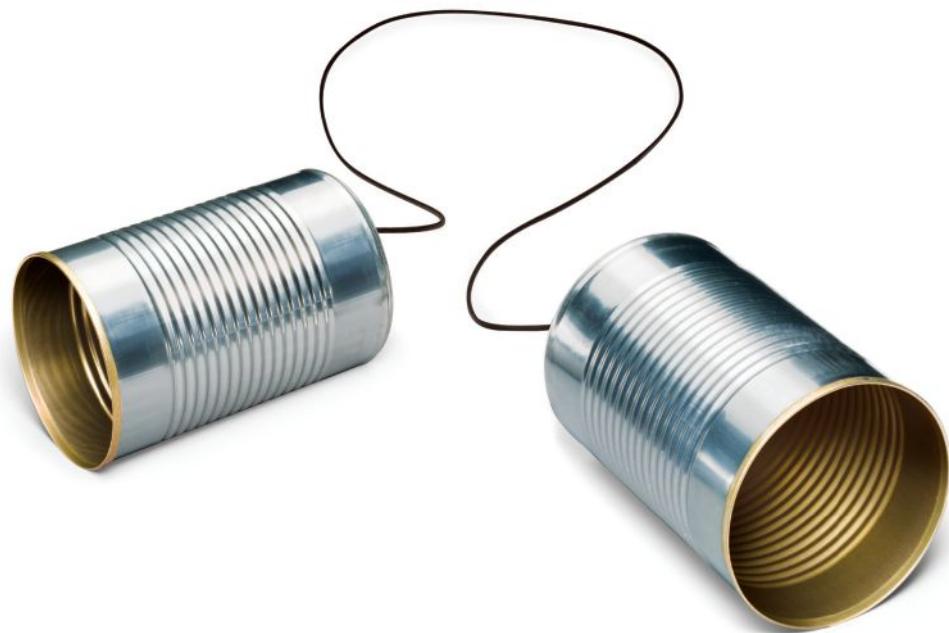
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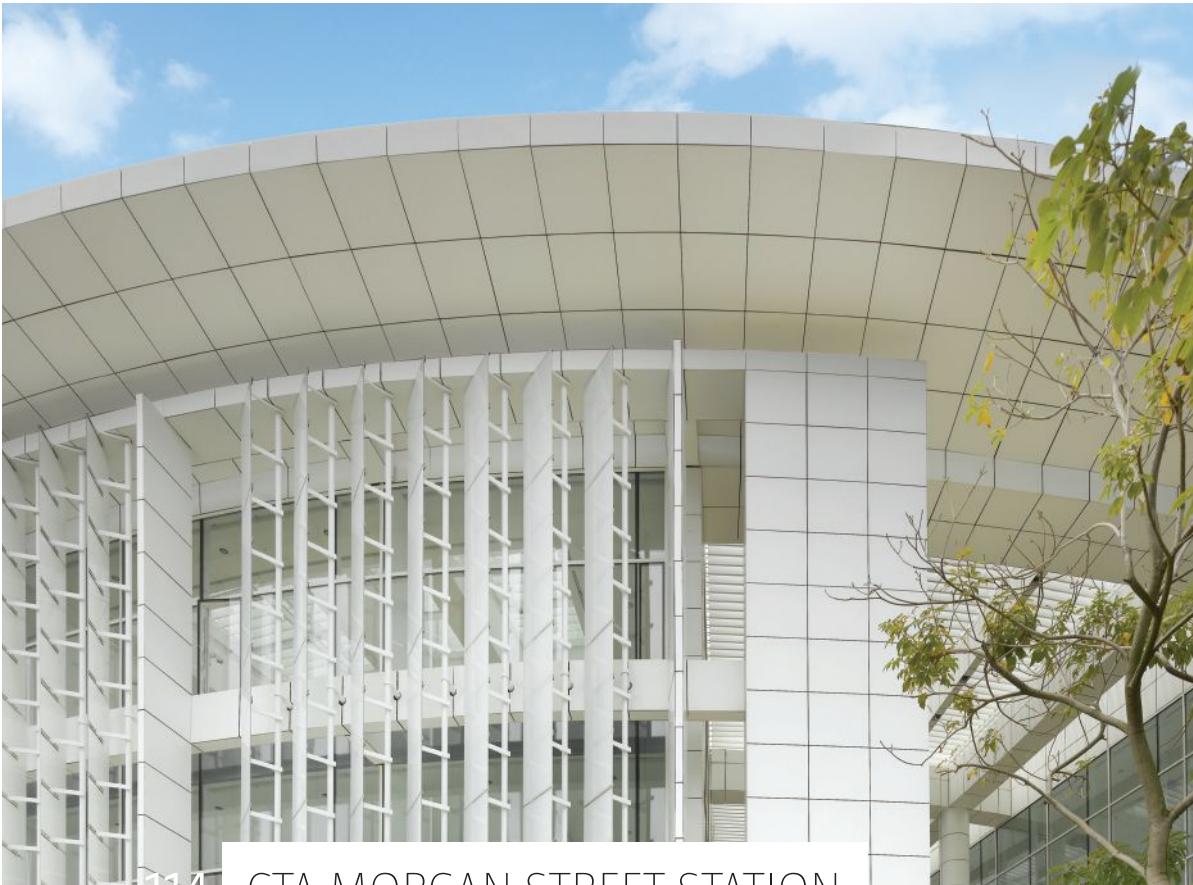


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ON THE COVER

Ross Barney Architects' CTA Morgan Street Station in Chicago.

Photo by
Kate Joyce

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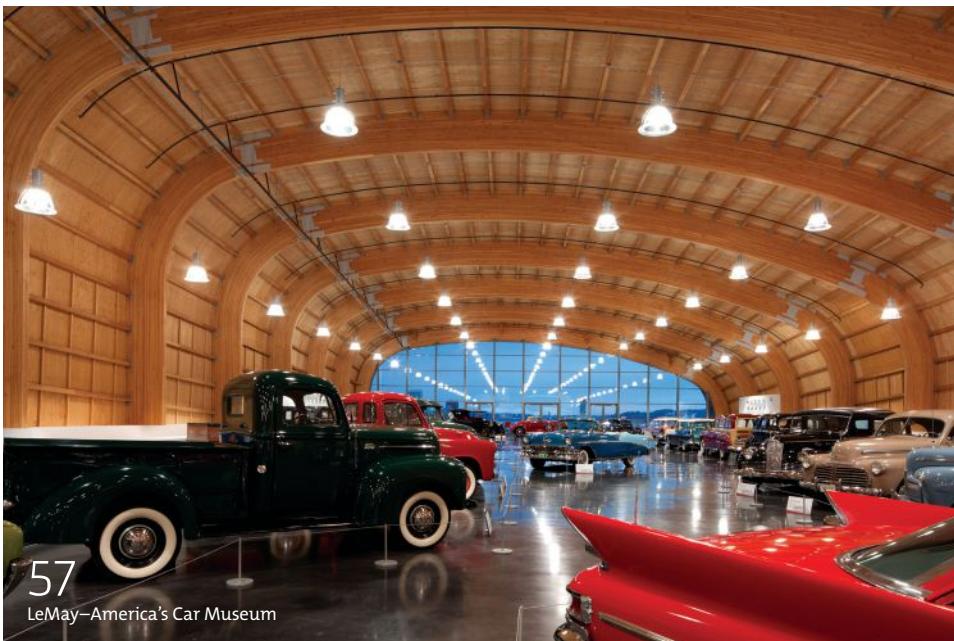
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EDITOR-IN-CHIEF
Ned Cramer, Assoc. AIA
ncramer@hanleywood.com

MANAGING EDITOR
Greig O'Brien
gobrien@hanleywood.com

ART DIRECTOR
Robb Ogle
rogle@hanleywood.com

DESIGN AND TECHNOLOGY

SENIOR EDITOR, DESIGN
Katie Gerfen
kgerfen@hanleywood.com

ASSOCIATE EDITOR, TECHNOLOGY
Wanda Lau
wlau@hanleywood.com

ASSISTANT EDITOR, DESIGN
Deane Madsen, Assoc. AIA
dmadsen@hanleywood.com

MULTIMEDIA

VIDEO PRODUCTION MANAGER
Kaitlyn Auchincloss
kauchincloss@hanleywood.com

SENIOR WEB PRODUCER
Armando Manzanares
amanzanares@hanleywood.com

ONLINE

SENIOR EDITOR, ONLINE
Kriston Capps
kcapps@hanleywood.com

ASSOCIATE EDITOR, ONLINE
Lindsey M. Roberts
lmroberts@hanleywood.com

COLUMNS AND FEATURES
SENIOR EDITOR, FEATURES
Eric Wills
ewills@hanleywood.com

SENIOR GRAPHIC DESIGNER
Melissa Meyers
mmeyers@hanleywood.com

GRAPHIC DESIGNER
Jessica Rubenstein
jrubenstein@hanleywood.com

COPY AND RESEARCH
QA/COPY EDITOR
Alexandra Rice
arice@hanleywood.com

COPY EDITOR
Christy Goodman

CONTRIBUTING EDITORS

Aaron Betsky; Blaine Brownell, AIA;
Elizabeth Evitts Dickinson; John Morris Dixon, FAIA;
Thomas Fisher, Assoc. AIA; Joseph Giovannini;
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EXECUTIVE VICE PRESIDENT
Ron Spink
rspink@hanleywood.com 202.736.3431

EDITORIAL DIRECTOR
Ned Cramer, Assoc. AIA
ncramer@hanleywood.com

GROUP PUBLISHER
Dan Colunio
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REGIONAL SALES MANAGER,
UNITED KINGDOM, EUROPE
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E-MEDIA SALES MANAGER
Adam Mowrey
amowrey@hanleywood.com
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GROUP PUBLISHING
SUPPORT MANAGER
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aharris@hanleywood.com

INSIDE SALES
AD TRAFFIC MANAGER
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MARKETING
MARKETING DIRECTOR
Stephen Roche
sroche@hanleywood.com

AUDIENCE MARKETING DIRECTOR
Mary Leiphart
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PRODUCTION
PRODUCTION MANAGER
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EDITORIAL AND ADVERTISING OFFICES
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4/23	Randolph, NJ	2-6pm Meadow Wood Manor
4/25	Arlington, TX	3-7pm Texas Rangers Ballpark
4/25	Denver, CO	2-6pm Sports Authority Field at Mile High
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5/2	Tempe, AZ	2-6pm The Buttes, A Marriott Resort
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5/9	Pontiac, MI	3-7pm Auburn Hills Marriott Pontiac at Centerpoint
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5/16	Ft. Lauderdale, FL	3-7pm Broward County Convention Center
5/16	Houston, TX	3-7pm Sam Houston Race Park
5/21	Chicago, IL	3-7pm Drury Lane Oakbrook Terrace
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DIALOGUE



WITH OUR SOVEREIGN DEBT NEARING \$17 TRILLION, A CALL FOR INCREASED GOVERNMENT SPENDING MAY SEEM LIKE A STRANGE, IF NOT INSANE, IDEA.

RECONSTRUCTION AND SYMBIOSIS

APRIL SHOWERS BRING NEW HOPE FOR GOVERNMENT INVESTMENT IN INFRASTRUCTURE AND, IF THE GODS ARE JUST, A BELATED PRITZKER PRIZE FOR DENISE SCOTT BROWN.

ON GOOD FRIDAY, President Barack Obama visited the Port of Miami, where, standing against an unwittingly ironic backdrop of Chinese-built cranes, he called yet again for the formation of a national infrastructure bank and other measures to help fund the renovation and construction of bridges, dams, parks, and the like. Just 10 days prior, the American Society of Civil Engineers released its quadrennial Infrastructure Report Card. Judging from the country's GPA—which has risen from a D to a D+ since the last report—the president's Miami proposal seems like a positively essential investment in our nation's future.

Still, with our sovereign debt nearing \$17 trillion, a call for increased government spending may seem like a strange, if not insane, idea. Yet spending is precisely what America needs, according to the president and economists such as Robert Reich and Paul Krugman. They believe that the best way to pay off the debt is to put Americans back to work. And what better work is there to be done than on projects that need to happen anyway?

The big banks are still reluctant to make business loans, so the government is the only entity with the cash to get cranes moving and workers working. What's the holdup? Politics.

Stimulus is a dirty word these days, synonymous with government waste, despite all that the 2008 and 2009 stimuli did to temper the Great Recession. The \$152 billion tax rebate under former President George W. Bush reportedly boosted consumption by 2.4 percent in the second quarter of 2008, while the Obama administration claims that its \$831 billion mix of tax breaks and spending saved or created between 1 and 3 million jobs.

Granted, 9 million jobs were lost overall, but in truth, neither outlay was big enough to offset the massive loss of jobs and savings when the economy tanked in 2007 and 2008.

The government's plan-by-default is to boost the economy by spending less. The "sequester," a 10-year, \$1.1 trillion cut in the federal budget, took effect March 1. It's too early to measure the fallout, but we have seen

just how well austerity is working in Europe—which is to say, it isn't. Across the continent, riots have broken out, governments have fallen, and the collective potential of an entire generation is going up in smoke.

Nobel Prize-winning economist Joseph Stiglitz claims, "It will take 10 years or more to recover the losses incurred in this austerity process." Infrastructure spending, by contrast, will boost the nation's slow economic recovery. And if the investment is especially smart—i.e., low-impact and high-performance—we will save billions of public and private dollars over time, build safer and more livable communities, increase our global competitiveness, create a host of financial and creative opportunities for architects, and foster a shared sense of national purpose. So, let's get to work.

A Facebook page and a petition on change.org are calling for Denise Scott Brown to be retroactively named as co-recipient of the Pritzker Prize that her husband and partner Robert Venturi received over 20 years ago.

Personally, I think it was shortsighted—even mean-spirited—of the 1991 jury to exclude Scott Brown, given her tremendous individual contributions to the fields of architecture and planning, as well as the epochal outcomes of her collaboration with Venturi. Where would any of us be without *Learning From Las Vegas*?

The fledgling, student-led movement was prompted by a pre-recorded speech that Scott Brown made for a luncheon last month in London. "They owe me not a Pritzker Prize, but a Pritzker inclusion ceremony," she said (being far too modest, in my opinion). "Let's salute the notion of joint creativity."

Fans, colleagues, employees, former students, and luminaries such as Ole Bouman and Zaha Hadid have electronically signed the change.org petition. I did, and you should, too.

Robert Venturi



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LETTERS



The Heart of Our Cities, February 2013

Regarding Victor Gruen and his contribution to the planning and architecture of cities: He was helped in this noble endeavor by another great desecrator, Garrett Eckbo (whose firm EDAW perpetuates and, in some cases, attempts to clean up the messes he made). The entire downtown of Eugene, Ore., went broke after the glorious design by those P/A Award Desecrators (or neo-Gruen/Eckbo designers), mostly thanks to the winners' great idea and helped by big box suburban stuff. Another great example of the complete and total failure was a firm called Curtis and Davis, whose stuff today is either torn down or so miserable that nobody in his right mind would claim the stuff.

CHARLES DESLER, OAK TERRACE, CALIF.

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My Liberal Guilt, February 2013

Sorry, but you should feel guilty, not just for buying a car in the most pedestrian-friendly city in the nation, but for wasting readers' time with a column that does nothing but feed your

personal needs while advocating for what D.C. needs less of. I lived in D.C. (and Boston) for most of the past seven years without a car and never missed it. In addition to Metro, walking, and cabs, there is Zipcar and Capitol Bikeshare. Your guilt (not just for "liberals") is well deserved.

JEFFREY C. DAIKER, AIA, MADEIRA BEACH, FL

I was disappointed because the car is a gas-guzzling, old-fashioned polluting machine. With the Nissan Leaf and the Tesla available today, I expected the confession to come with a silver lining, but I presume that as irresponsible as we architects have been with regard to sustainability, we still are with regard to cars. VIBEKE LICHTEN, NEW YORK



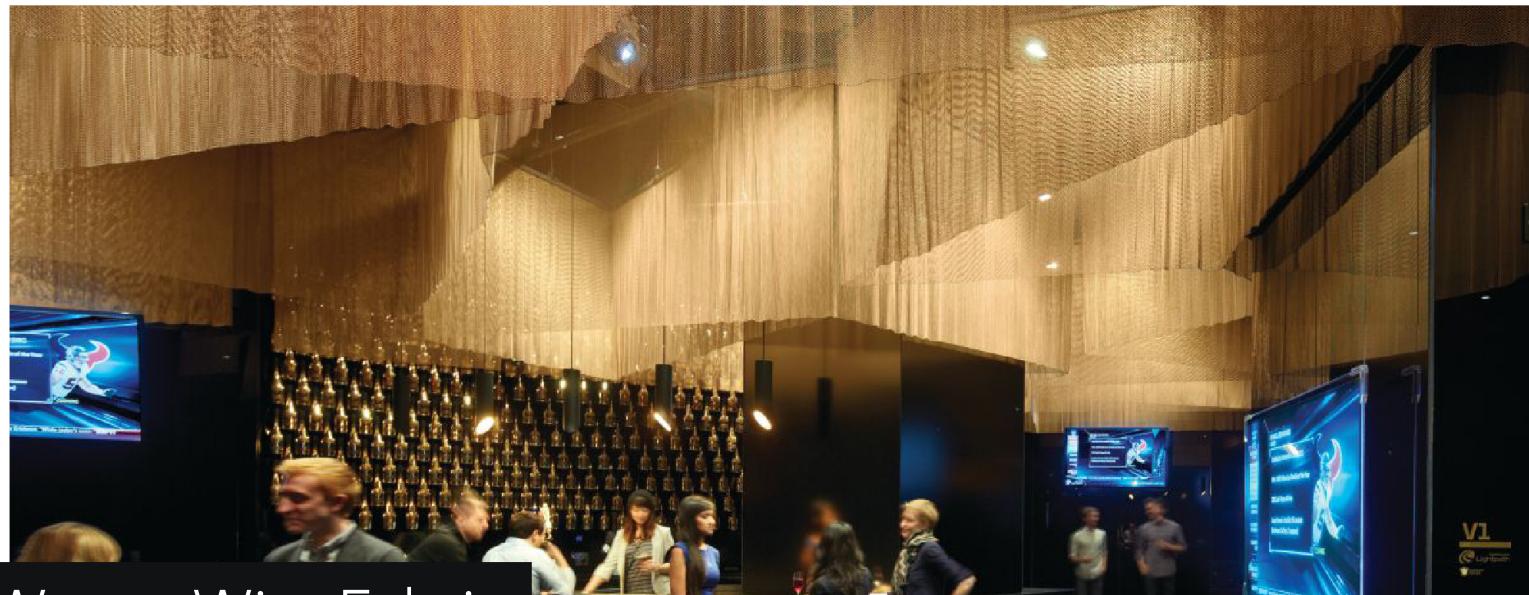
Correction: The February story "Hives for Minds" included the wrong project name and rendering for a development by Erdy McHenry Architecture. The correct caption should have read: "The Erdy McHenry–designed Grove at Cira Centre South will occupy a former U.S. Post Office Annex site land-leased from Penn."



AKDA
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Golden words
@architectmag: "I've fought my whole life for architecture as an art form." — Thom Mayne, AIA 2013 Gold Medal winner.

Alex Bozikovic
@alexbozikovic
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Lateral Office on the
cover? Congrats on
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neighbours.

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CONTRIBUTORS



WITOLD RYBCZYNSKI

Witold Rybczynski, Hon. FAIA, is a writer and architecture critic. He is the author of 17 books, including *Home* (1987) and *The Most Beautiful House in the World* (1989). Rybczynski's biography of Frederick Law Olmsted, *A Clearing in the Distance* (1999), won the J. Anthony Lukas Prize in 2000.

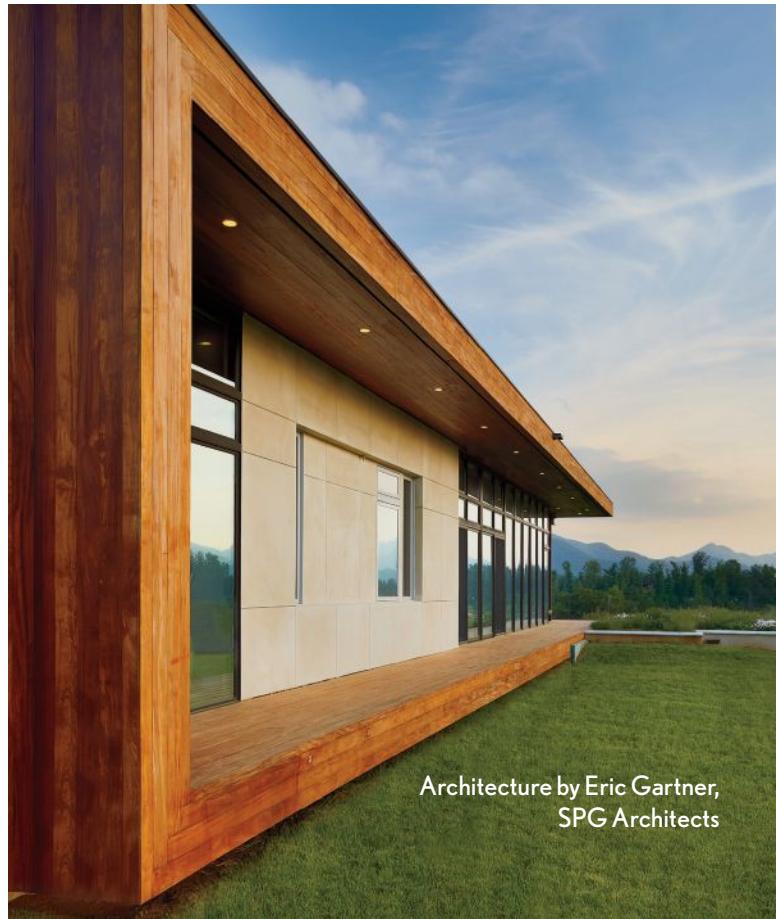
Born in Scotland, Rybczynski was raised in England and Canada. In Montreal, he apprenticed with Moshe Safdie, FAIA, and worked as a practicing architect. Rybczynski also taught at McGill University, where he did

research in minimum-cost housing, work that led to a P/A Award in 1991. He has served as the architecture critic for *Saturday Night*, *Wigwag*, and *Slate*. Rybczynski served two terms on the U.S. Commission of Fine Arts, and in 2007 received the Vincent Scully Prize as well as the AIA's Honor for Collaborative Achievement.

An emeritus professor of urbanism at the University of Pennsylvania, he lives with his wife in Philadelphia. His latest book, *How Architecture Works: A Humanist's Toolkit*, is due out this fall.

SEE RYBCZYNSKI'S ESSAY ABOUT THE VALUE OF SLOW ARCHITECTURE ON PAGE 76.

MICHAEL COOPER



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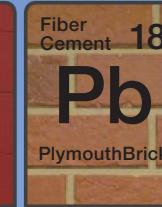
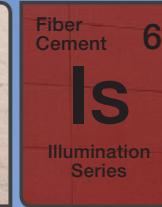
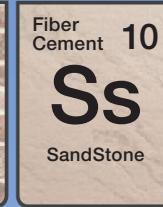
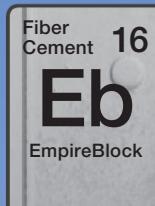
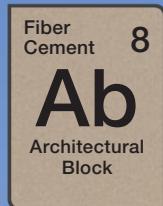
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FRONT



TOYO ITO TAKES THE PRITZKER (FINALLY)

TOYO ITO JOINS SUCH LAUDABLE DESIGNERS AS TADAO ANDO AND FUMIHIKO MAKI AS JAPAN CLAIMS THE PRITZKER ARCHITECTURE PRIZE FOR THE SECOND TIME IN THREE YEARS.

In a decision that will shock no one and impress few with its daring, the 2013 Pritzker Architecture Prize has been awarded to Toyo Ito, Hon. FAIA.

The choice of Ito is a sound one, even obvious, and unimpeachable in the manner of previous awards to Richard Rogers, Hon. FAIA (2007); Norman Foster, Hon. FAIA (1999); and Renzo Piano, Hon. FAIA (1998). Like Ito, those past laureates were conscientious architects with a deep record of built work who became outsized figures on the international scene and were given their Pritzkers only after a lifetime of innovation and accomplishment. But as in the selection of Jørn Utzon, Hon. FAIA, in 2003 (perhaps to combat the perception that he was a one-hit wonder) or Zaha Hadid, Hon. FAIA, in 2004 (widely seen as doubly political: a move to break up an old boys' club and a response to the war in her native Iraq), there may be other factors at

play. Is the choice of Ito a corrective measure by the Pritzker jury, three years after a pair of his former employees, the talented but still green Kazuyo Sejima and Ryue Nishizawa (doing business as SANAA), received the prize?

If so, there's a whiff of justice in the pick. And it doesn't make Ito any less deserving of the award that has come to be known as architecture's highest honor.

Toyo Ito's career began in 1965, the year he graduated from the architecture program at the University of Tokyo and got a job working in the office of Kiyonori Kikutake, Hon. FAIA. Along with Kenzo Tange (who won the Pritzker in 1987), Kikutake was an active force behind the birth and growth of Metabolism, a school that Rem Koolhaas (Pritzker in 2000), in his recent book on the subject, proffered as "the last movement that changed architecture." Active in the 1960s and '70s, the metabolists cloaked



Toyo Ito

an interest in safeguarding city life from natural disaster and overpopulation—that is, saving the world—in an architectural language that merged a Bucky Fuller-esque faith in technology, with hints of Archigram sass as well as the obsessions with modularity and the *béton-brut* megastructuralism that came to define the speculative city-building of the era.

That Ito chose Urban Robot as the name of his firm when he first went out on his own in 1971 is a sign of sympathy with the somewhat older cadre of Japanese architects who promoted Metabolism, and it is possible to see examples of the persistent influence of that style even in his more recent work. Ito's Sendai Mediatheque, completed in 2000 in Miyagi, Japan, is perhaps his best known and most celebrated project; it deploys columnar structural webs that penetrate the floor planes in a manner that hearkens to metabolist ideals, including "The Big Roof," the pavilion that Kenzo Tange designed for the Osaka Exposition in 1970, the high temple of Metabolism and a benchmark of the style.

But looking for art-historical roots in Ito's work is a trap. Was a touch of Kahn the starting point for the diaphragm arches of the Tama Art University Library (Tokyo, 2007)? Is there a smidge too much late-breaking Decon in his Serpentine Gallery Pavilion (London, 2002)? This misses the point. Ito is too good an architect to saddle himself with a signature look or suite of effects, too smart to get tangled up in the style game. That is, too often, the easy way out for architects, one favored by no small number of those deemed Pritzker-worthy by juries in other years. Adopting a strong style can be a shortcut to success, but it is also a choice architects make out of fear, to limit what can be the overwhelming press of questions that bears on any new design. What form should a building take? What should it look like? How will I arrange the plan? The answers are infinite—horrifying!—but relying on style alone opens the way to the easy ones. Whatever motivated the jury to premiate him now, what sets Ito apart has been his refusal over his 40-plus-year career to limit his work, to make it easy on himself. As jury member (and 2002 Pritzker laureate) Glenn Murcutt, Hon. FAIA, points out in a statement, Ito's architecture "has not remained static and has never been predictable."

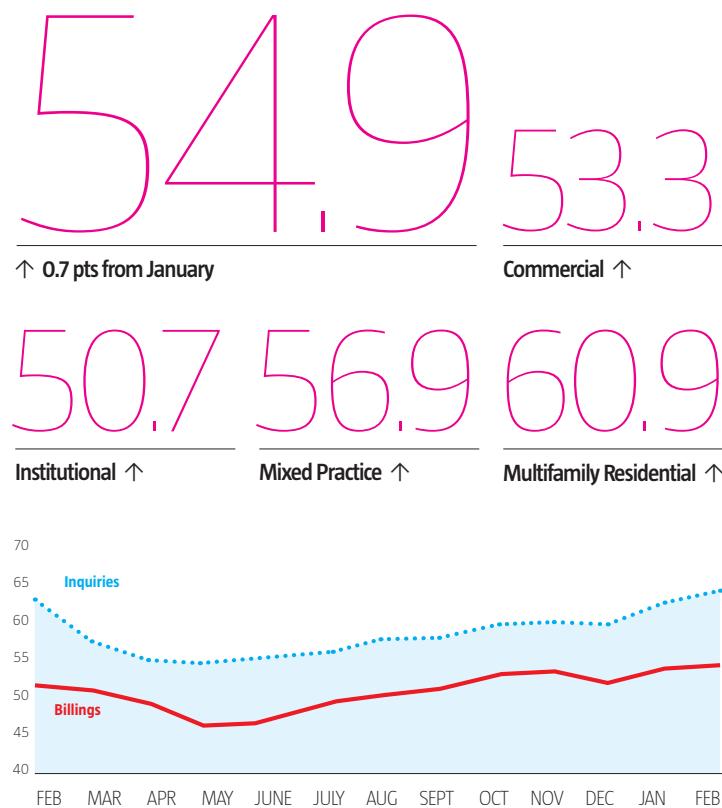
This is an understatement. Very little appears to connect the Za-Koenji Public Theatre, completed in Tokyo in 2008, and the forthcoming Taichung Metropolitan Opera House in Taiwan, though the two buildings have kindred programs, and construction on each began in the same year. Even within a single project—such as with the two pavilions of the architecture museum that bears his name on an island in Japan's Inland Sea (pictured on previous page)—Ito's architecture can run from light, rational, thin-membraned vaults to the sort of brooding, rusted-steel chunk of a windowless head-scratcher that would have made John Hejduk smile. What in Ito's work presaged the glooping blob of a roof that drapes the rigid plan of his Meiso no Mori Municipal Funeral Hall in Gifu, Japan (2006)? Maybe the metal vaults that define the spaces of his Yatsushiro Municipal Museum (1991)—cold and sharp, but also attempting to billow? Maybe?

I remember that last building well, the only Ito building I've been able to see in the flesh, as a conceptual and constructional mess. All the better: Mistakes are sometimes a sign that an architect is doing something right. In its variety, in its ambition, even in its moments of mediocrity, Ito's work gives us a living picture of a true designer: laboring to solve problems, learning, perhaps growing, sometimes pulling it all together with genius, often falling short, but always, in making the decision to reject the comfort of a fixed style, brave.

It is a momentous decision for any architect to take that more difficult path, and for Toyo Ito it has been costly. Had he picked one style and run with it, a man of such obvious talent, he might have gotten his Pritzker long ago. **PHILIP NOBEL**

February 2013

Architecture Billings Index



ABI UP FOR SEVENTH STRAIGHT MONTH

THE AIA'S ARCHITECTURE BILLINGS INDEX SHOWS CONTINUED STRENGTH FOR THE DESIGN INDUSTRY.

In February, the American Institute of Architects' Architecture Billings Index marked its seventh consecutive month of growth in the demand for architectural design services.

With a national score of 54.9, up from January's score of 54.2, the architecture industry is seeing continued strength and a higher rate of growth of billings than it has seen since the bubble burst five years ago.

The score for project inquiries came in at 64.8, which is also up from the January score of 63.2. Project inquiries have now been growing for more than four years straight, after a shaky 2008.

February was another good month for the architectural profession, which has been rolling for half a year. The 54.9 score for billings is the highest score since November 2007, which also saw a score of 54.9. The seven-month run of billings scores above 50 is the longest such run since 2007. The 64.8 for project inquiries is the highest score since January 2007.

All four of the nation's regions and all four of the industry's sectors also showed growth, as they have for five straight months. One has to look to summer 2007 or before to see a positive streak like that across the entire design and construction industry nationwide. **GREIG O'BRIEN**

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THAT HEFTY REFERENCE GUIDE, ARCHITECTURAL GRAPHIC STANDARDS, IS NOW AVAILABLE IN DIGITAL FORMAT.

The architectural design process has taken another step toward the cloud. The popular *Architectural Graphic Standards* (AGS), which is part of the Graphic Standards series published by John Wiley & Sons, is now available on MADCAD.com through a cloud-based, annual subscription service.

After its debut in 1932, AGS soon became a bookshelf staple for design professionals and students alike. With instructional text and clear technical drawings by the architects and original authors, Charles Ramsey and Harold Sleeper, AGS is now updated regularly by members of the AIA. The 11th and latest edition of the "Architect's Bible"—as it is commonly referred by the publisher—was released in 2007. Like its predecessors, the 11th edition

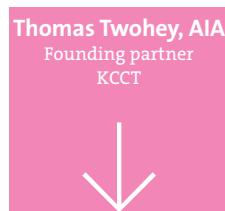
was available in hardcover copy and on CD. At 1,120 pages, the literal heavyweight in design standards rarely makes it outside of the office to jobsites.

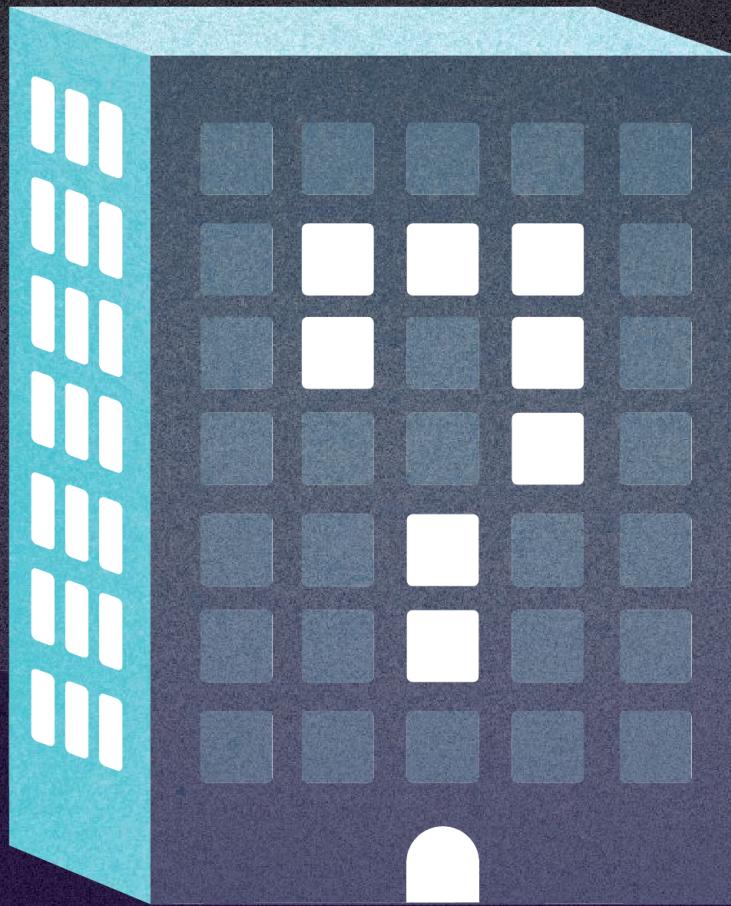
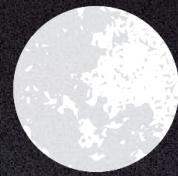
The cloud-based version alleviates the heft. Users can access it from any desktop computer, tablet, or mobile device with an Internet browser and connection. Along with the ability to search and access content and 3,000 architectural details in DFX, DGN, and DWG formats, subscribers can create custom libraries that link AGS content with MADCAD's repository of more than 50,000 cloud-based codes and standards.

Wiley and MADCAD will be putting other titles from the Graphic Standards series in the cloud in the near future. WANDA LAU

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SWEET DESIGN

The Williamsburg waterfront's most visible icon—the defunct Domino Sugar Factory—is getting some new neighbors, courtesy of a master plan developed for the Brooklyn, N.Y., neighborhood by SHoP Architects, James Corner Field Operations, and Two Trees Management Co. Once approved, the plan will bring 2,284 residential units, 631,000 square feet of new office space, and more than 5 acres of new public park land to the site. **KATIE GERFEN**

TECHNOLOGY

WORLD'S FIRST 3D PRINTING PEN FEATURED ON KICKSTARTER

THE PEN, WHICH DRAWS PLASTIC 3D IMAGES AND MODELS, RAISED MORE THAN \$1 MILLION IN CROWDFUNDING IN TWO DAYS.



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From the files of how-to-make-a-million-bucks-in-two-days on the crowdfunding-website Kickstarter, we bring you the 3Doodler, advertised as the world's first 3D printing pen. The prototype featured on the Kickstarter website shows how the pen, about 7 inches long, uses ABS plastic, commonly used with conventional 3D printers, to "draw" three-dimensional plastic objects or models.

How about a 3D version of the Eiffel Tower? Why yes, say Maxwell Bogue (a Purdue University computer science graduate) and Peter Dilworth (a former Massachusetts Institute of Technology Leg Laboratory staffer). The founders of Boston-based Wobble Works, the self-described "emergent toy company," invented the pen—a handheld 3D printer used to print the French landmark pictured.

The first million took just two days; but by the campaign's end, the project had garnered 26,457 backers, who pledged a total of \$2,344,125 to help bring the 3Doodler to market. **ERIC WILLS**

"THE DREAMS OF THE 1960S BEGAN TO DISAPPEAR IN THE 1970S. THE ECONOMY COLLAPSED AND SO DID THE OPTIMISM OF THE METABOLISTS. I THOUGHT OF MYSELF AS A DROPOUT ROBOT."

—TOYO ITO, IN AN INTERVIEW WITH THE *LOS ANGELES TIMES*

TECHNOLOGY

Best in BIM: The AIA TAP BIM Awards

THE WINNERS LEVERAGED BIM'S EVOLVING CAPABILITIES AND SHOWCASED BEST PRACTICES.

The perception of building information modeling (BIM) as merely an advanced graphics and documentation tool continues to fade. Architects are working with members of all the building trades to leverage BIM's evolving capabilities in project delivery and building operations, says RK Stewart, FAIA, who chaired the jury for the 2013 AIA Technology in Architectural Practice (TAP) BIM Awards program. "The evolution that we've seen has raised the bar to nongraphic uses" such as building modeling, construction estimating, and project scheduling, he says.

In March, the AIA announced the recipients of the ninth annual AIA TAP BIM Awards, which highlights best practices in the use of BIM technology.

"It's a continuity of the information that surrounds the [building] design, construction, and operation that we're trying to highlight as this new tool becomes more ubiquitous across the industry and not just the profession," Stewart says.

The jury named two winners and three honorable mentions, recognizing projects in three of the six available award categories.

CO Architects won one AIA TAP BIM Award for the firm's Health Sciences Education Building at the Phoenix Biomedical Campus in Phoenix. Fentress Architects and Mortenson Construction won the other award for their Ralph L. Carr Colorado Judicial Center in Denver. The two award recipients were the "most well-rounded of the entries and hit on all aspects of the utilization of BIM to design, deliver, and operate the project—and included metrics that explained their story," Stewart says.

These firms and the honorable mention awardees—CollinsWoerman and GLY Construction, the Miller Hull Partnership, and the University of Cincinnati—will be honored during the AIA National Convention in Denver on June 19. **W.L.**



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ROBOT LOBSTER PAVILION

ROBOTIC FABRICATION TECHNIQUES AND BIOMIMETIC PRINCIPLES COME TOGETHER IN AN EXPERIMENTAL PAVILION BY STUDENTS AND FACULTY AT THE UNIVERSITY OF STUTTGART.

The pursuit of biomimicry typically begins with the literal emulation of forms and structures found in nature. But the more interesting path often involves the translation of a model biology into an unexpected design outcome.

An experimental pavilion constructed in late 2012 by faculty and students at the Institute for Computational Design (ICD) and the Institute of Building Structures and Structural Design (ITKE) at the University of Stuttgart in Germany is one example of this approach. Professors Achim Menges and Jan Knippers directed the design and construction of the lightweight structure, which was robotically fabricated using carbon and glass fibers—and modeled after the structure of a lobster.

According to the project brief, the pavilion was inspired by the various material properties of a lobster's shell: "The lobster's exoskeleton (the cuticle) consists of a soft part, the endocuticle, and a relatively hard layer, the exocuticle," the brief reads.

The pavilion isn't designed to resemble a lobster or its exoskeleton. Instead, the structure

of the pavilion was modeled instead after the way a lobster's shell is organized. "The cuticle is a secretion product in which chitin fibrils are embedded in a protein matrix," the briefing continues. "The specific differentiation of the position and orientation of the fibers and related material properties respond to specific local requirements."

The final design is a highly efficient structure resulting from the integration of robotic fabrication techniques and biomimetic principles. Although the formal and material qualities of the pavilion are refreshingly unexpected and seemingly biologically informed, it would have been ideal if the researchers could have utilized biobased materials rather than energy- and carbon-intensive industrial fibers.

The same structure composed of a synthesized, biochemically produced chitin—although not yet technically feasible at such a scale—would embody lightness in terms of weight as well as in terms of environmental footprint. **BLAINE BROWNELL, AIA**



NEWS

MARK LAMSTER DOES DALLAS

LAMSTER WILL SERVE AS THE ARCHITECTURE CRITIC FOR THE DALLAS MORNING NEWS.



Mark Lamster

In March, *The Dallas Morning News* reported the hire of Mark Lamster as its new architecture critic. Lamster also joins the faculty of the David Dillon Center for Texas Architecture at the University of Texas at Arlington.

Lamster has his work cut out for him. Dallas is nobody's definition of a pedestrian-friendly, public transit-enabled, high-density utopia. Yet the excitement in Dallas about urban planning efforts is palpable and growing, and activism toward these ends is yielding results.

When I asked him about the new gig over email, Lamster told me that he's got a 1947 essay by Henry Russell Hitchcock on the brain: "The Architecture of Bureaucracy and the Architecture of Genius." In the Dallas–Fort Worth metroplex, he'll find his share of both. **k.c.**

Van der Leer, Meet Van Alen

DAVID VAN DER LEER, CURATOR AT THE BMW GUGGENHEIM LAB, IS LEAVING THE MUSEUM TO HEAD THE VAN ALEN INSTITUTE.

David van der Leer announced in March that he is leaving his position with the Solomon R. Guggenheim Museum to join the Van Alen Institute as its new executive director.

Van der Leer served as associate curator at the Guggenheim, where he worked on such shows as "Frank Lloyd Wright: From Within Outward" in 2009 and "Contemplating the Void" in 2010. With fellow associate curator Maria Nicanor, van der Leer worked as curator for the BMW Guggenheim Lab, a joint initiative between the Guggenheim and BMW Group. Van der Leer succeeds Jeff Byles, who was appointed interim executive director following the departure of former executive director Olympia Kazi in spring 2012.

The Van Alen Institute is a nonprofit architecture organization whose mission is to promote architecture and design and its role in civic life through debate, competitions, fellowships, publications, and other avenues. **k.c.**

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House Bill Would Require New Design for Eisenhower Memorial

A UTAH REPRESENTATIVE SEEKS TO SCRAP FRANK GEHRY'S DESIGN AND SLASH FEDERAL FUNDING FOR THE MEMORIAL PROJECT.



A new bill put forward in the House of Representatives would reverse the course of the Dwight D. Eisenhower Memorial by scrapping the existing design by Frank Gehry, FAIA, and eliminating federal funding for the project.

In March, Rep. Rob Bishop (R-Utah) introduced the Dwight D. Eisenhower Memorial Completion Act, a bill that would amend the 2000 Department of Defense Appropriations Act that provides the statutory authority for the Eisenhower Memorial. The purpose of the new bill is to "facilitate the completion of an appropriate national memorial to Dwight D. Eisenhower." It would do so, specifically, by mandating an alternative to Gehry's memorial design.

Other provisions of the bill would limit the terms for Eisenhower Memorial commissioners to four years and extend the expiration for the legislative authority for the memorial. By cutting federal funding for the memorial, which will occupy a 4-acre public park just off the National Mall, Rep. Bishop says that his bill will save \$100 million in future funding for the commission.

"I am saddened by Congressman Bishop's attempt to thwart the memorialization of one of America's greatest generals and presidents, Dwight D. Eisenhower," says Eisenhower Memorial Commission chair Rocco Siciliano. **k.c.**

RAMPING UP AMPARO

TEN Arquitectos recently announced the reopening of the Amparo Museum in Puebla, Mexico. The firm won a 2007 competition to add new galleries to house a private collection of Pre-Columbian artifacts, Spanish Colonial art and furnishings, and modern art. In a lecture at the National Building Museum last spring, Enrique Norten, Hon. FAIA, described working on the renovation as "making a city park out of the collection." The reconfiguration of the museum provided Norten with the opportunity to invent contemporary spaces to house the collection.

DEANNE MADSEN



LEGO GOES BIG

THE BJARKE INGELS GROUP WILL DESIGN A MUSEUM FOR LEGO IN THE COMPANY'S HISTORIC HOME IN DENMARK.

The Bjarke Ingels Group is designing the LEGO Brand House, a public LEGO museum and experience center, in Billund, Denmark, the company's historic home and headquarters.

"It's going to be looking at LEGO from all its different aspects—LEGO as an artform, its cultural impact," Bjarke Ingels says.

The LEGO company already maintains one museum in Billund—the LEGO Idea House—but that museum is not public. The LEGO Brand House, designed by BIG to be opened in the next few years, will invite visitors to view exhibits but also participate in its programming.

"When we were doing the research for it [the LEGO Brand House], we realized, if you would consider it just an art museum, you would be able to fill it with so much user content of such a high quality," Ingels says, referring to the incredible uses people find for the toys. Ingels mentions the proliferation of YouTube videos featuring LEGO applications as an inspiration for his work. A complex LEGO contraption for moving around sports balls may be one example of the kind of user work Ingels is describing; a trailer for the Christopher Nolan film *The Dark Knight Rises* built entirely from LEGOs is another.

LEGO Group Owner and former LEGO CEO Kjeld Kirk Kristiansen described his vision for the LEGO Brand House last year. "It will be somewhere where people can enjoy active fun but at the same time it will be an educational and inspirational experience—everything that LEGO play offers," Kristiansen said.

"I've been meeting with these AFOLs"—Adult Fans of LEGO, or super-users—"and I've been learning quite a bit about LEGO," Ingels says. "It will be the best museum ever." We'll have to wait: BIG hasn't released a design. **k.c.**



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AWARDS

EIGHT VOICES, EMERGING

YOUNG PRACTICES FROM THE U.S., CANADA, AND MEXICO WERE HONORED IN THE 2013 EMERGING VOICES AWARDS.

The Architectural League of New York has announced its 2013 Emerging Voices. Selected in a juried portfolio review of work by firms from the U.S., Canada, and Mexico, the eight winning practices were selected for their breadth of work and ability to create an impact across architecture, landscape architecture, and urbanism.

The Emerging Voices program, which has been overseen by League program director Anne Rieselbach since 1986, is seen as a bellwether for the next big names in design. Previous winners include Steven Holl, FAIA; Jeanne Gang, FAIA; SHoP Architects; Brad Cloepfil of Allied Works Architecture; and this year's AIA Gold Medalist Thom Mayne, FAIA, of Morphosis.

The Architectural League will present a series of online features on each of the laureates and their work beginning in April. K.G.



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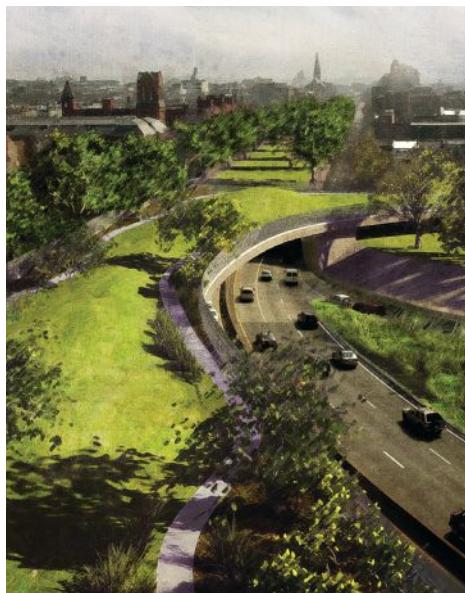
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More Than an Asterisk, Please

AN ONLINE PETITION CALLS ON THE PRITZKER ARCHITECTURE PRIZE COMMITTEE TO RECOGNIZE DENISE SCOTT BROWN AS A CO-RECIPIENT OF THE 1991 AWARD GIVEN TO HER HUSBAND.

A petition on Change.org demands that Denise Scott Brown, FAIA, be retroactively recognized for her contributions that led to her husband winning the Pritzker Architecture Prize in 1991. Robert Venturi, FAIA, received the prize—architecture's highest honor—for the work of Venturi, Scott Brown and Associates, in which Scott Brown is co-partner.

The petition calls on Martha Thorne, executive director for the Pritzker Architecture Prize committee, to redress an “unfortunate oversight” in recognizing Venturi but not Scott Brown.

“Brown had been a co-partner for over 22 years in their practice Venturi, Scott Brown and Associates and played a critical role in the evolution of architectural theory and design alongside Venturi for over 30 years,” the petition reads. “She co-authored the 1977 book *Learning from Las Vegas*, among others.”

Called for a response, a spokesperson for the Pritzker Architecture Prize said, “I notified Mr. [Thomas] Pritzker. He’s taken it under advisement.”

The longstanding debate over the prize’s attribution was revived in March after Scott Brown gave comments at the *Architects’ Journal’s* Women in Architecture Lunch in London. “They owe me not a Pritzker Prize but a Pritzker inclusion ceremony,” she said in prepared remarks, according to *Architects’ Journal*. “Let’s salute the notion of joint creativity.”

Thorne said in an email that “the Pritzker Laureate is chosen annually by a panel of independent jurors. Those jurors change over the years, so this matter presents us with an unusual situation. The most that I can say at this point is that I will refer this important matter to the current jury at their next meeting.”

Questions raised more than 20 years ago about Venturi’s prize were echoed following the announcement of the 2012 award winner. When Wang Shu won the Pritzker Prize last year, some observers asked why Lu Wenyu—Wang’s wife and co-partner in Amateur Architecture Studio—did not receive equal recognition. *Los Angeles Times* architecture critic Christopher Hawthorne asked Wang last February whether his wife should have been awarded as well. “Yes,” Wang told Hawthorne. “Every time when I finish the first sketch of a building, she is the first one to see it. And if she doesn’t like it, I go back and draw it again.”

Kazuyo Sejima and Ryue Nishizawa received a joint award for their work (as SANAA) in 2010. Jacques Herzog and Pierre de Meuron jointly received the Pritzker in 2001, marking the first time the Pritzker had ever been granted to a pair from a single firm. In 1988, both Gordon Bunshaft and Oscar Niemeyer received the prize, but for separate practices. Of 36 Pritzker awardees, only two are women: Sejima and Zaha Hadid, Hon. FAIA, who became the first woman to receive the prize in 2004.

According to Thorne, the Pritzker Architecture Prize jury next meets in May. **K.C.**

CONTINUING ED

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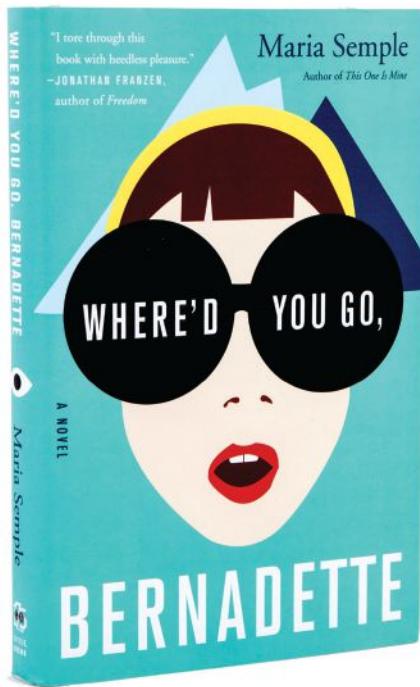
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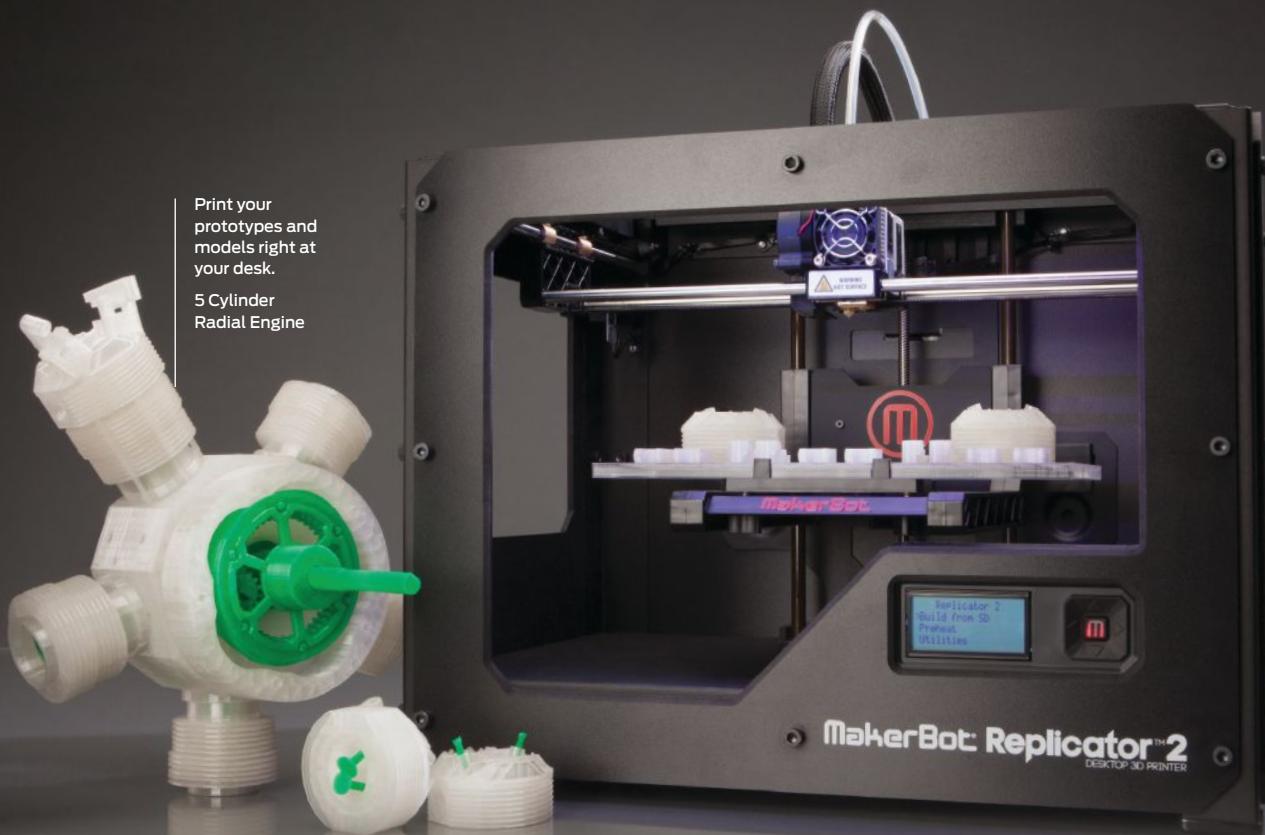
In the novel *Where'd You Go, Bernadette*, author Maria Semple introduces an architect who realizes two visionary designs—then disappears. In a review, critic Jessa Crispin investigates creative genius, asking what happens to recluses: “[W]ith Bernadette Fox, the titular protagonist, the answer is that the energy she once put toward the design and creation of innovative houses is now spent on her own destruction. Not in a clichéd haze of pills and booze; she instead becomes sour, fearful.” Read Crispin’s full review on ARCHITECT’s website. **K.C.**



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'City of 7 Billion' Wins 2013 AIA Latrobe Prize

MENDIS AND HSIANG WILL PLAN A CITY WITH THE SAME POPULATION AS THE WHOLE PLANET.



Joyce Hsiang



Bimal Mendis

Earth—population 7 billion—faces changes that its residents can only describe as existential threats. The changes are unpredictable. Sea levels are rising faster than they used to, but no one can say just how high they will rise. Global temperatures could rise 2 F by 2100—or they could rise 11.5 F. Even if Earth's 7 billion residents could put their hands on the levers to control some of these changes today, the outlook will be different by 2100, when the world's population is half again larger than it is today.

So you can see the logic behind the work of Bimal Mendis and Joyce Hsiang, researchers who are designing a city with a population of 7 billion people. With "The City of 7 Billion," Mendis and Hsiang, researchers at Yale University's School of Architecture and co-founders of Plan B Architecture & Urbanism, plan to simulate population crisis at a global level—but one situated within the framework of a city, a context in which people can in fact put their hands on the levers.

For their effort, the American Institute of Architects College of Fellows has recognized Mendis and Hsiang with the 2013 Latrobe Prize, a \$100,000 award for research that leads to advances in architecture. Mendis and Hsiang plan to build a multiscalar model of the world in which every dataset—demographics, finance, geography, infrastructure, and resources—is applied to an urban framework. It's *Sim Earth* meets *Sim City*, an open-source analysis of a city facing a world's worth of population strain and environmental stress. K.C.

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—SARAH WILLIAMS GOLDHAGEN, *THE NEW REPUBLIC*

SOFT, YET HARDCORE

Designed by Kennedy & Violich Architecture for the 2013 International Building Exhibition in Hamburg, the competition-winning Soft House row houses responds to the exhibition theme of "cities and climate change." Flexible layouts and wireless building controls merge with adjustable, photovoltaic-covered, textile louvers. D.M.



MIND & MATTER

STICK-BUILT

RECENT PROJECTS BY JAPANESE DESIGNERS REVEAL THAT BRACKETING, A STEPPED LOAD-BEARING TECHNIQUE, IS BECOMING MORE POPULAR.

Sou Fujimoto's compelling proposal for the 2013 Serpentine Pavilion in London's Kensington Gardens is the latest example of an aesthetic of dematerialization unique to Japanese design. This approach consists of the aggregation of a great number of self-similar, ultralight components into a cloudlike mass. Because of its nearly immaterial nature, the atmospheric poché that results is defined more by void than solid, creating thickened but not physically inhabitable spaces in place of conventional architectural surfaces.

Fujimoto's enormous nest will be composed of thousands of 20mm steel poles arranged within a three-dimensional orthogonal grid. "The Pavilion will be a delicate, three-dimensional structure, each unit of which will be composed of fine steel bars," the architect said in a press release. "It will form a semitransparent, irregular ring, simultaneously protecting visitors from the elements while allowing them to remain part of the landscape."

This method of material assembly is reminiscent of the wooden bracketing used to support the heavy roof structures of traditional Japanese temples and shrines. In recent designs by Fujimoto, Kengo Kuma (pictured), Ryuji Nakamura, and others, bracketing has become a predominant form-making technique.

Although it can be quite labor-intensive and unforgiving in terms of connection precision, this mass-assembly approach raises provocative questions about the relationship between interior and exterior, form and structure, as well as solid and void. How very Japanese. B.B.

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A TALK WITH ...

JEFFREY INABA, ASSOC. AIA, AUTHOR OF *ADAPTATION: ARCHITECTURE, TECHNOLOGY, AND THE CITY* AND FOUNDER OF C-LAB.



What made you decide to release *Adaptation* as a digital publication?

We did do a print version of it, but a really limited run. The idea is that it will predominantly live as a digital piece. In the sense that the publication addresses technology, we thought it would be good to take advantage of available technology. The main point for us in looking at technology was in asking how technology could interface with architecture, and so it made sense as a digital publication.

Briefly, what can readers expect to learn from *Adaptation*?

What the book argues for is something counter-intuitive: Technology is great. It's something very important that architects need to be aware of and adapt to, but at the same time, our argument and claim for the book is that it's actually digital technology that needs to adapt to architecture if it is to evolve.

If we look at the '90s and ideas of virtual reality, and the idea that digital technology would produce a space independent of the physical world, it's interesting to see now that the developments in digital technology are such that it has totally abandoned that approach, and for it to expand, it needs to interface with the physical world.

Can you give us an idea of what to expect in your next publication?

We did research on Crown Hall [at the Illinois Institute of Technology]. You'd think that in thinking about the postwar period, the celebration of new technologies, and the attempt to integrate technologies together, that there'd be no better person than Mies van der Rohe to realize those things. Mechanical systems were a weird stumbling block for Mies. He constantly redoing the plans and sections in order to hide the mechanical system rather than to make it an integral part of the design.

We interviewed the mechanical engineers that renovated the building as part of the restoration of Crown Hall, and then we explored this idea that even those people who we think of as being champions of technology—in an aesthetic sense as well as an attempt to be modern—are often times the very people who have suppressed the relationship between technology and buildings. D.M.

FULL INTERVIEW AT
ARCHITECTMAGAZINE.COM

ESTO GALLERY

Architecture critic Paul Goldberger said in his acceptance speech for the 2012 Vincent Scully Prize that he will never review a building he hasn't personally visited and explored, calling architecture "the way most people connect to the built environment." Doorways, then, are the literal and metaphorical portals through which people experience those connections. ARCHITECT has gathered a selection of these entrances, illustrating the range of first impressions that buildings had on Esto photographers. D.M.



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AIA VOICES

THE EDITOR | SURVEYING GLOBAL OPPORTUNITIES

In 2005, Michael Hammond founded WorldArchitectureNews.com (WAN), which has become a reliable source of global architecture news and project reports. With major job growth in design and architecture projected globally in the coming decade, the field of possibilities is expanding beyond the Middle East and China for U.S.-based architects. As local markets evolve, Hammond has pinned his site's coverage to individual buildings as barometers for growth. "The project," he says, "remains the common denominator."

WAN was set up in 2005 to respond to a growing internationalism in architecture, since most news outlets were nationally focused. But a building is a building everywhere, and everyone understands that. That's how we communicate architecture. And we have the most wonderfully diverse readership.

Architectural practice and an architectural product are all about scale. Firms like RTKL or Gensler have offices all over the world and adjust their focuses accordingly. As you look at smaller firms, you see a range of different focuses at the local or national scale. There's a huge amount of work being carried out in the Philippines, Turkey, Thailand, Poland, Sri Lanka, and Nigeria, but you have to look at it in terms of risk—what kinds of firms can bear it, what's involved, and so on. It's riskier to work in Nigeria than in, say, China. Nigeria's opportunities are expanding, but it's whether or not you, as a practitioner,

can limit your risk exposure.

The Middle East is, of course, hard to categorize—it's a very diverse place. Dubai's market matured very quickly, but places like Abu Dhabi were slower burns, so to speak. Dubai just shows what can happen and how volatile things can be. Think back to September 2008 when the property market crashed within the span of a week. Abu Dhabi weathered the storm—but that gets into a discussion of who's in power in those countries. I do notice, though, that the AIA and RIBA are expanding more and more beyond their stated geographical bounds. It's a good thing, I think—and it gets to a level of cooperation that can only be good for architecture.

To cover all of this, WAN delivers project news, and we have a very simple, objective model of reporting. Where we get more involved is with our awards program. I sit on a lot of its panels and when you're comparing two schools—one in London, let's say, and one in Nairobi—the judges get really taxed because the two markets and circumstances are so different. But, in the end, quality of design usually surfaces, and I think good design is something that allows all of us to share a discussion about architecture in spite of geography.

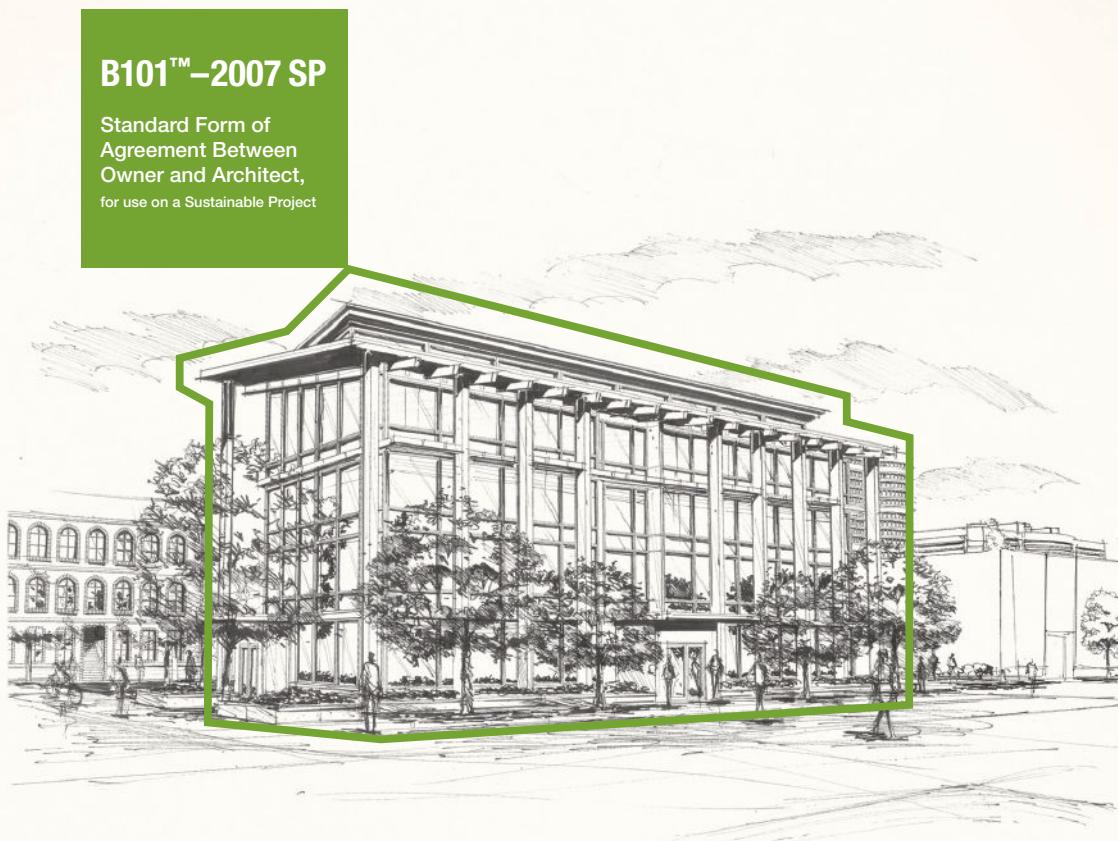
—As told to William Richards **AIA**

↗ WAN and AIA New York will co-host World Architecture Day 2013, Oct. 6–8. Learn more at worldarchitecturenews.com.



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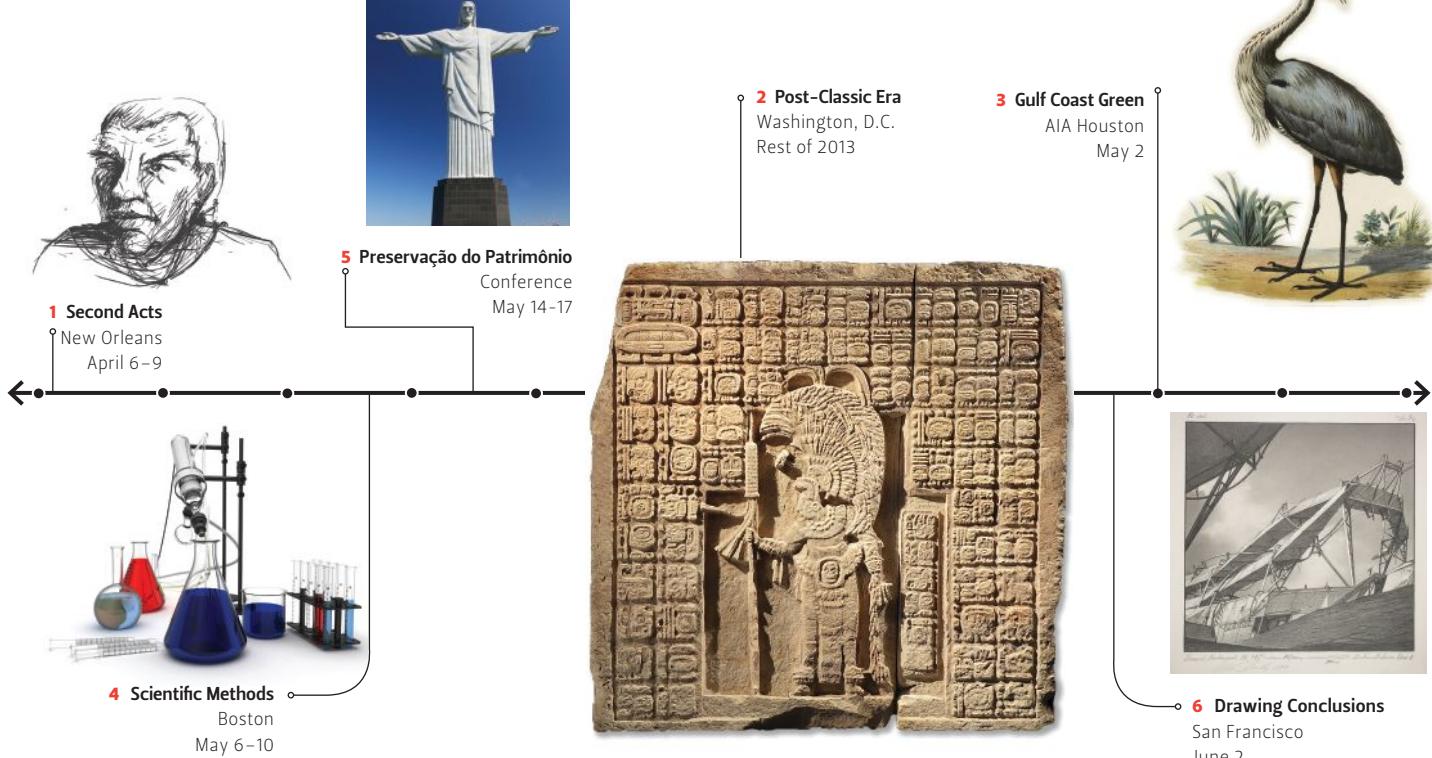
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ACROSS THE INSTITUTE

Compiled by William Richards



1 Second Acts. Research into elder-friendly design, long-term living, senior living, multigenerational housing, and hospice has flourished over the last quarter century across gerontology, healthcare, planning, and architecture. Defining best practices for the next generation of functional, attractive buildings can only be collaborative effort. To this end, the Environments for Aging Conference in New Orleans, sponsored in part by the AIA Design for Aging Knowledge Community, helped lay the groundwork for high design and optimal spaces for an aging population, Apr. 6-9.

↗ Learn more at network.aia.org/designforaging.

3 Gulf Coast Green. The Gulf Coast is not just 1,800 miles of coastline; it's hundreds of bays, inlets, marshlands, and lagoons that constitute one of the world's largest hubs of economic activity. Sustainable architecture—which includes flood mitigation, design with ecology, and environmentally friendly materials—matters more now than ever before. Join AIA Houston for the eighth annual Gulf Coast Green Symposium on May 2.

↗ Learn more at aiahouston.org.

2. Post-Classic Era. It's often hailed as an underrated masterwork by Philip Johnson, FAIA, but for anyone who's been to the Pre-Columbian Pavilion at Dumbarton Oaks, flying under the radar was entirely the point. Nestled in the trees at the inside crook of the museum's L-shaped site plan, Johnson's supple, marble-paneled piers and glass façade snakes around a hidden square courtyard. Eight circular galleries inside the building contain the Bliss Collection's Moche pots, stone reliefs, and textiles—the best hidden secret in Washington, D.C. The pavilion turns 50 this year, occasioning Dumbarton Oaks's "50 Years of Pre-Columbian Art," which runs through the end of the year.

↗ Learn more at doaks.org.

4 Scientific Methods. For future doctors, chemists, and scientists, the high school chemistry lab is a foundational experience. For future architects, it's a window into the opportunities in biomedical research environments—and all of the risks involved. Risk and reward will be the central themes of "Guidelines for Laboratory Design: Health and Safety Considerations" (which offers a whopping 38 AIA/HSW credits) at the Harvard School of Public Health, May 6-10.

↗ Learn more at ecpe.sph.harvard.edu.

5 Preservação do Patrimônio. Instituto de Arquitetos de Brasil (IAB) members have promoted preservation since the early 1980s across the country's 3.2 million square miles. However, industrialization along the coast and in the hinterland imperils conservation and restoration efforts. This year's International Conference on Preservation of Historic Monuments, entitled "ArquiMemória 4," in Salvador da Bahia, takes on the "urban dimension of equity" to find some common ground for heritage conservationists and developers.

↗ Learn more at www.iab-ba.org.br.

6 Drawing Conclusions. When Lebbeus Woods died last year, obituarists struggled to define a man who spent his career rejecting definition. Was he an architect or a draughtsman? Was his art implicitly or explicitly political? Was "experimental architecture" the object of his art, to be built one day, or the subject of his art, to be debated only? Was his worldview dystopian or optimistic—or even naive? "Lebbeus Woods, Architect," featuring 75 drawings at the San Francisco Museum of Modern Art, hopes to answer these questions. Through June 2.

↗ Learn more at sfmoma.org.



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AIAPRACTICE

WORK FLOWS | NOTES ON COSMOPOLITANISM



ILLUSTRATION: JUNKWON

HOW DO RECENT GRADUATES DECIDE WHETHER TO PRACTICE IN the U.S. or pursue work overseas? Considering that up to half of the students in some American architecture schools are foreign-born, their answers might depend on where they come from.

Americans seeking work abroad face significant hurdles such as laws, which differ from country to country in terms of licensing, taxation, and contracts. "We do have trade barriers," says James Wright, AIA, a principal at PageSoutherlandPage, "[but] the U.S. Commerce Department has been providing basic business intelligence to U.S. firms and helping lobby host countries for more consistent architectural agreements and practice laws." Wright, a member of the AIA International Committee Advisory Group, has invited representatives from the Commerce Department to address some of these issues in "Moving to an International Practice," a session he's co-chairing at the 2013 AIA National Convention in Denver in June.

Some of those trade barriers can also be softened with design diplomacy. Jessica Salmoiragh, director of federal relations at the AIA, works to develop relationships with the Commerce Department for trade missions and international partnerships to help U.S. architects reduce those barriers. It's good timing, too. India alone will spend \$1 trillion on new infrastructure before 2018, but it also means that U.S.-trained Indian architects will be eager to take advantage of those opportunities. "A lot of young Indian nationals have decided to leave the U.S. and go there to practice," Salmoiragh says.

For many foreign nationals, the cachet of working for a U.S. firm is the ticket to a senior-level position in their home country or elsewhere. Take Jade Jiambut: A native of Thailand, he landed a job at Handel Architects in New York after graduating last year from Tulane University. "There are so many people from different countries practicing in one place," he says. "I felt working here would be more beneficial in the long run than going back home right away."

But it's getting harder to stay. After their student visas expire, graduates can work for 12 months before they need a firm to sponsor them in order to obtain a long-term H-1B visa from the State Department, which is difficult to do when jobs are scarce. Ammar Eloueini, Int'l. Assoc. AIA, who was born in Beirut, graduated from Palais-Malaquais in France and Columbia University in New York, and is now a Favrot Professor of architecture at Tulane, recalls that many of his Columbia colleagues found jobs in academia and established side practices in the late 1990s and early 2000s—a path that's not as accessible today. "It's harder now to find a teaching job," Eloueini says. "Other countries seem to offer greater potential than the U.S., especially given the paperwork required to work here."

Those seeking registration, of course, must find a way to pursue IDP credits abroad. "There's the perceptual value of an American degree and the regulatory value of an American degree," says Michael Monti, executive director of the Association of Collegiate Schools of Architecture. "But there is no way to know how many foreign students study here to get a U.S. license, and how many are simply seeking an American education."

Meanwhile, Salmoiragh and 2012 AIA president Jeff Potter, FAIA, traveled to Rio de Janeiro recently to talk to architects working on the 2016 Olympic Park, which is being built on the former Brazilian grand prix track across more than 300 acres situated southwest of the city's center. There's also partnership potential with Brazil's 2014 FIFA World Cup and the 2014 Olympic Winter Games in Russia. The task is to "figure out where the jobs are and establish the connections to make them happen," Salmoiragh says. —Cheryl Weber **AIA**

↗ Learn more about AIA trade missions at aia.org/advocacy.



AIArchitect APRIL 2013

Border Crossings

What does an “international region” mean these days, anyway?

FOR THE LAST HALF-DECADE, CONSTRUCTION CRANES HAVE BEEN as ubiquitous in the United Arab Emirates as the shrubby desert grass. Western architects have answered the call of the region’s prosperity—names like Gehry and Guggenheim arriving in places like Doha and Abu Dhabi.

But even in the shadow of skyscrapers, the Middle East construction industry is sensitive to political and economic forces. In just the past four years, a global recession and the Arab Spring have brought waves of violence and unrest to the region, making other markets, such as China, appear stable by comparison. As a result, many U.S. architects working in the Middle East closed their office doors and left for good.

Despite the tumult, in just two years of existence the AIA’s Middle East chapter has become the second-largest of the AIA’s five international chapters—evidence of the region’s continuing importance. Significant opportunities exist in the Gulf Cooperation Council countries, and there is plenty of work to be had, according to Thierry Paret, AIA, past president and founder of AIA Middle East and director/treasurer of AIA’s new International Region.

Established in late 2012, AIA’s International Region (the AIA’s 19th region) encompasses all areas of the globe outside the United States. The region is designed to provide more structure and resources for architects working abroad, helping them navigate the sometimes contentious issues surrounding contracting, payment, scope of services, and cultural exchange that arise in international practice.

The AIA offers programs and events, and works to strengthen ties with architects in the host countries. Competence and a high ethical standard keep American architects competitive abroad, as does their leadership in certain development types such as research facilities, large-scale retail, universities, laboratories, hospitals, hotels, resorts, and airports.

The Institute is also working with the U.S. Department of Commerce to promote trade missions that will bring professional design services to new markets in China and the Middle East, which remain strong sectors. Design and construction industry experts are also looking toward Brazil, which is rich in resources and has shown rapid growth in the past decade.

In the Middle East, however counterintuitive it may seem given its profound political and cultural divisions, Arab clients frequently seek out American firms for their design expertise and renowned professionalism, Paret says. “They want American architects on the ground,” he adds. “There’s a huge amount of respect here for American architects.”

Throughout Asia and Europe, and in developing countries as well, this feeling is echoed. Whereas earlier periods of professionalization saw American architects being trained abroad and bringing that expertise home (or foreign-born architects like Walter Gropius and Marcel Breuer teaching at American universities), current trends see more and more American-trained architects exporting their skills. Currently, about 2,400 AIA members live and work outside the United States, and many more work offshore on a temporary or commuter basis.



The benefits of international practice are manifold. Architects working abroad might find an even greater competitive advantage overseas than they would competing against their peers for domestic projects, and they have access to the brightest talents emerging from globally recognized universities. International markets can also serve as a hedge against domestic downturns (although this is far from foolproof). And sometimes foreign markets such as China, whose square mileage is roughly equivalent



to that of the United States, are able to fast-track major projects that would be bogged down in bureaucracy here.

The work is not without risk, however. Among the issues that big firms address is nonpayment. And, without a doubt, there is physical danger in working in countries besieged by war and terrorism. Developing countries pose security risks for anyone who spends time there and architects are not exceptions. Architects seeking work overseas also need to remember that, within each

region, nations differ widely on every level. "One of the things we've come to understand from being over here is just how pluralistic this region is," says Andrew Caruso, AIA, who is leading Asia talent strategy efforts for Gensler out of its Shanghai office, with a special focus on China, Japan,

South Korea, Singapore, Thailand, and India. "Each country is different in terms of economic market, business systems, and educational systems. If you look at Tokyo and Bangalore, there are significant differences in our clients' needs and interpersonal cultures, and these differences require thoughtful and

strategic consideration." The AIA's historic capacity for exchanging ideas, developing best practices, and building a vibrant design community could bring value to the region, Caruso says.

Elizabeth Golden, an assistant professor of architecture at the University of Washington who has practiced in New York and Berlin, went overseas during the recession of the early 1990s. "Friends of mine had told me that Berlin was booming after the fall of the Berlin Wall, and that it was easy to get a job there, even as a foreigner," she recalls.

"There was this huge panorama of a [Berlin] construction site [in *The New York Times*] that really impressed me. It was then that I decided to make the move."

She joined the design team of Renzo Piano, Hon. FAIA, and Christoph Kohlbecker working on Potsdamer Platz, the public square in Berlin that was then the largest construction project in Europe.

She admits that, if she had it to do over again, she would take advantage of the connections and opportunities offered by the AIA Continental Europe chapter. "I felt very disconnected from practice in the U.S. while I was working in Germany," she says. "I think it would have been a great way to stay in touch with other professionals like myself who were working abroad."

Despite the risks, architects working abroad have much to gain and much to give. The world's largest and most successful firms are multinational in the scope of their work, and their gains abroad will continue to encourage all large firms based in

the U.S. to consider options outside of the local markets that they have historically pursued. After all, economic capital knows few, if any, boundaries, and work for architects tends to follow it.

—Kim A. O'Connell AIA

↗ Learn more at aiainternational.org.

AIAPERSPECTIVE

PERCEPTION IS REALITY



PHOTO: WILLIAM STEWART

RECENTLY, I ATTENDED A CHAMBER OF COMMERCE BREAKFAST IN Tampa, Fla., to connect with some business leaders and hear the guest speaker—a noted economist who promised to share his insights on the direction of our domestic markets. His credentials were impressive, so I pulled out a pad to take notes—thinking that this would be valuable information to mine later as my firm worked on our marketing plan.

He began by outlining the potential implications of the fiscal cliff, the threat of sequestration, and the looming debt ceiling. Interesting and troubling information, sure, but nothing I wasn't already aware of. Then he turned from Washington to challenges right here in my home state of Florida, specifically the likelihood of an uptick in the rate of inflation once the economy regained its footing.

Now he had my full attention. How would this affect the cost of credit, the eagerness of clients to invest in new projects, liability and health insurance premiums, and business expenses? But when he specifically identified green design and sustainable practices as a major factor fueling increased inflation, I put down my pen and said to myself: "This is wrong. It's creating a negative perception. We architects need to do something about this."

He obviously had not done his research. If he had, he would have seen a future of new jobs created by new technologies. He would have seen a future in which lifecycle costs decreased in buildings designed to be less dependent on fossil fuel, and medical costs dramatically lowered because of better-designed, pedestrian-oriented, healthier communities—all rewards of a commitment to sustainable practices.

Back in my office, I sat down with our staff and shared my notes. Their reaction was like mine—exasperated that this perception could

become an accepted marketplace reality. So what can we do about it?

It all boils down to taking the initiative to get involved. Our responsibility as design professionals is to be the visionaries who look beyond the present to create tomorrow's solutions. That's leadership. As citizen architects, we must advocate for responsible planning and the adoption of sustainable lifestyles that will benefit our communities long after we are gone. We cannot allow the business environment to confuse a snapshot in time for a larger, more nuanced picture of a deeper reality. Thoughtful design does not increase inflation; it's a strategic investment that creates a better, healthier, and more prosperous quality of life.

The lesson I learned from the chamber presentation was not the one the speaker intended. Instead, I was reminded that, whenever we sit down to plan—whether it's our firm's marketing strategy or as visionary community leaders—we must be aware of getting stuck in the instantaneous gratification of the immediate.

Whatever the startup costs, investing now for a future good is the right thing to do.

A future that leads to a better quality of life for everyone will be shaped by a reenergized architecture profession, building leaders who advocate for a long-term commitment to sustainable design. Now that's an investment worth making. **AIA**

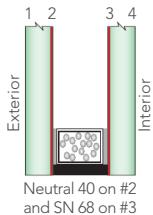
Join our conversation at aia.org/repositioning.

Mickey Jacob, FAIA, 2013 President

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PRODUCTS



MELTDOWN

Each lamp in **Cappellini**'s luminaire seems to be dissolving through its 285mm-diameter glass housing. That's because Meltdown is intended as a metaphor for Japan's 2011 nuclear disaster. As the owner of Italian design firm Cappellini, Giulio Cappellini (who discovered the luminaire's designer, Swede Johan Lindstén) told us: It's "a meltdown of the glass under the strong radioactive nuclear power." The globes can be composed linearly or as a purposefully chaotic bunch, in monochrome or an array of six colors. www.cappellini.it. Circle 100

Written by
Lindsey M. Roberts



ALLROUND

Designed by Danish firm Iskos-Berlin, the classic Allround stacking chair produced by **Stylex** was intended to be a quiet object, designer Boris Berlin says. He and his colleague Aleksei Iskos try to make "objects that don't compete with the surroundings or the architecture." The recycled-content steel frame has 13 finish options (bright chrome, shown), 10 options of exposed wood for the shell, and multiple upholstery options. Six chair configurations include side chair (shown), counter stool, and bar stool.

stylexseating.com Circle 101



TEC UNCOUPLING MEMBRANE MORTAR

For use in tile installations, **H.B. Fuller Construction Products'** white or gray dry-set mortar comes in 50-lb. moisture-resistant bags. Designed specifically for Schluter Systems' Ditra uncoupling membrane as well as its Kerdi waterproofing membrane, the mortar (shown as gray) allows for level transitions between tile and flooring, and waterproofing, respectively. tecspecialty.com Circle 102



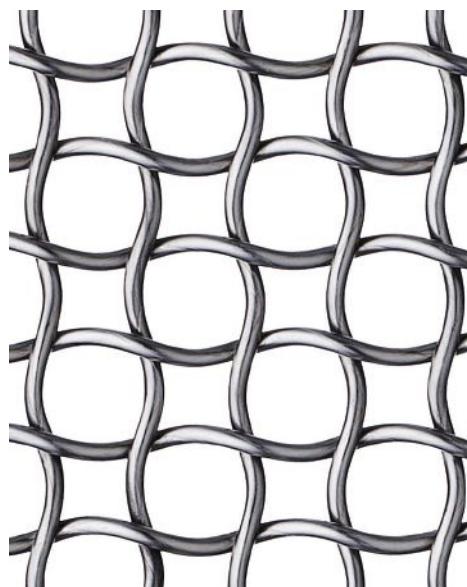
WAVE

The simple elements of walnut wood and sandblasted glass comprise Toronto-based **Merganzer Furniture & Design**'s newest line of tables.

A coffee table and two side-table configurations are available for custom orders, after which owner

Brett Lundy gets to work, sawing one board of wood into multiple pieces before reassembling them and carving the table into its rippling form.

merganzer.com Circle 103



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DESIGN CATALOG

In the Spotlight

THE STRATEGIES AND TOOLS FOR WALLWASHING ARE IMPROVING, THANKS TO A NEW GENERATION OF SOLID-STATE LUMINAIRES—INCLUDING THESE ILLUMINATING ATTENTION-GRABBERS.

Text by Brian Libby



BEVELED 2.0 WARM GLOW DIMMING, USAI LIGHTING

Good for: Long life (up to 50,000 hours), creating a warm ambience.

Color temperature: 2700K; dims to 2200K

In the past, LEDs could not replicate the warmth of incandescent light bulbs at lower intensities, unbudging from the 3000K to 3500K range, says KGM Lighting partner Martin Van Koolbergen. USAi's product starts to act "like what everybody's used to seeing."



LIGHT BOARD, ERCO LIGHT SCOUT

Good for: Gallery, museum, retail, and accent lighting. **Color temperature:** 3000K, 4000K

For a gallery at Parsons The New School for Design, MFA Lighting Design program chair Derek Porter favored this product's versatility. "You can do spot lighting, wallwashing, and flood lighting ... just from changing out the different lens accessories." And it sticks to the native rectangular shape of LEDs.



FRAQTIR POINT, THE LIGHTING QUOTIENT

Good for: Uniform illumination of 8- to 9-foot walls without scalloping or striations. **Color temperature:** 2700K, 3000K, 4000K

While several LED products can graze, they lack the optics to do a traditional wallwash, says LAM Partners' principal Robert Osten. "[It] requires a tailored light beam in a batwing shape ... [which] Elliptipar (a division of TLQ) is working on."



SKYRIBBON INTELLIHUE WALLWASHING POWERCORE, PHILIPS COLOR KINETICS

Good for: Creating a spectrum of colors, including white. **Color temperature:** 2000K to 10,000K

LEDs in the past did not produce true white well, but this four-color, light-cove fixture—available this May—can produce white and almost any other color, Osten says. With RGB and white diodes, the product can change color and yield "a good honest white."



LED T8 MURO-oval, FINELITE

Good for: Illuminating vertical surfaces such as whiteboards. **Color temperature:** 3000K, 3500K, 4100K

Teachers tell lighting designer Nancy Clanton, of Clanton & Associates, that "the teaching wall is the most important surface to light." This luminaire will sit close to the whiteboard and aim straight down. "The reflected glare goes to the floor," Clanton says—and not into the eyes of teachers and students.



WALL/SLOT 6000 WS-L60 RECESSED PERIMETER, LITECONTROL

Good for: Wall grazing in tight spaces. **Color temperature:** 2700K, 3000K, 3500K, 4100K

In confined spaces, LEDs have the potential to overheat. This wallwasher can withstand enclosed conditions while dissipating heat, Clanton says. "The life projection testing takes into account that this luminaire is going to be installed in a wall slot."

OUT OF THE SHADOWS

Ceilings were the primary place for luminaires in the past, particularly when drop ceilings were at the height of popularity in the 1970s. Wallwashing was reserved for illuminating lobbies and public spaces. But, as Denver lighting designer Nancy Clanton, president of Clanton & Associates, points out, "Most of us look at walls, not at floors." Even when walls were the focus, fluorescent and incandescent lamps were nearly impossible to direct at a precise place.

LEDs, however, produce directional light that can travel longer distances than fluorescent and incandescent lamps, and target very specific areas, producing a cinematic effect that designers call "grazing."

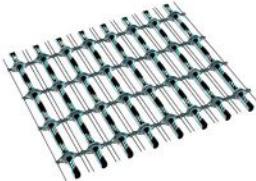
But solid-state lighting isn't a panacea. LEDs, particularly those that tend to be cheaper or operate at low wattage levels, can lack the warm colors of incandescents and overheat more than fluorescents. And many manufacturers and designers have merely applied LEDs to cylindrical enclosures intended for traditional light sources.

Wallwashers may be bridging the gap. The emerging products are not only intended for LEDs from conception, but are also overcoming previous limitations in color temperature, luminance, and overheating. **B.L.**

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STRATUM

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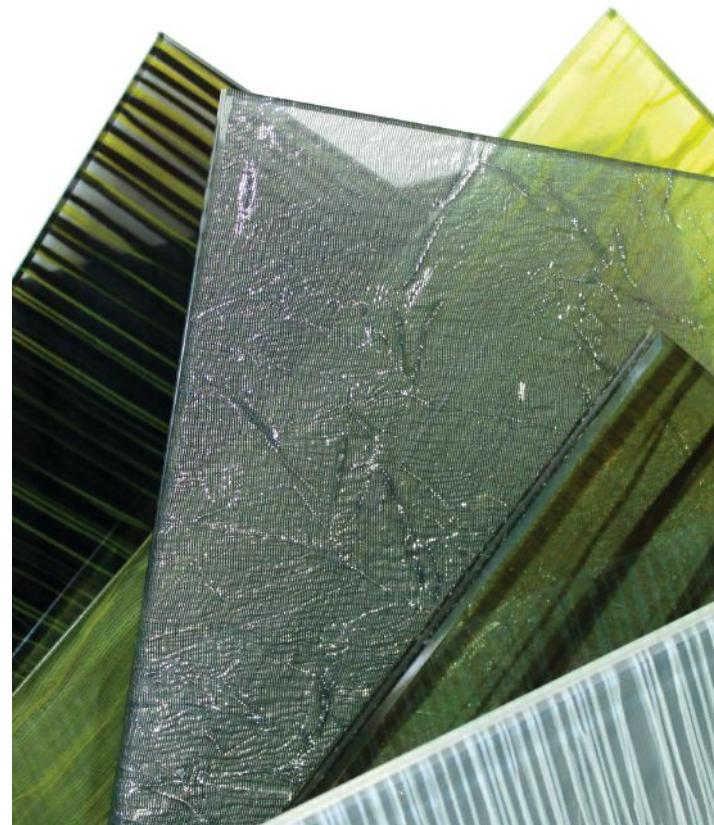
PHARAOH

The new Pharaoh pendant shows off the Plumen's curves, and it's no coincidence: **Lightyears** designed it in collaboration with the lamp's inventor, English design company Hulger. The 306mm-by-330mm luminaire features injection-molded ABS plastic with mirror coating and aluminum that hides the light source when off and reveals it when on. lightyears.dk Circle 106



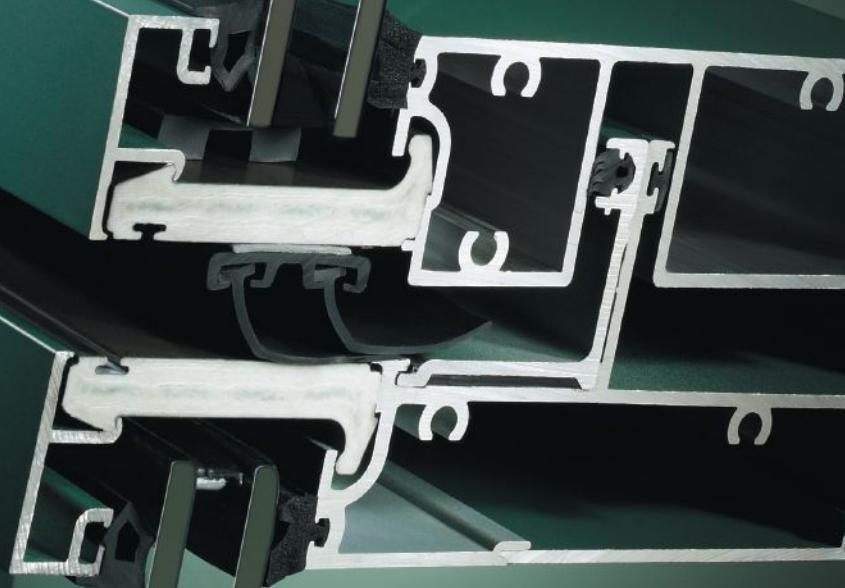
AIRBLADE TAP

One of **Dyson**'s newest-generation of dryers allows users to dry their hands without leaving the sink: The Airblade Tap, made out of marine-grade steel, has infrared sensors that first signal the release of water, and then deliver two sheets of puffed air from each blade, drying hands in 14 seconds. Comes in 11.65" for the short version and 12.61" for the tall. A 12.06"-deep wall option is also available. dyson.com Circle 107



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To avoid the elongated monotony of a barrel vault, Alan Grant and Large Architecture designed the sleek shell of the LeMay Museum with an irregular form that recalls the hood scoop of a vintage car.

DETAIL

Cavalier Cool

L.A.'S ALAN GRANT DESIGNS A WORLD-CLASS CAR MUSEUM ON A PARKING-GARAGE BUDGET.

Text by **Logan Ward**

Photos by **Laura Swimmer**

A DOZEN, MAYBE 15 TOPS. That's how many people Los Angeles designer Alan Grant, AIA, expected at a public meeting in Tacoma, Wash., a decade ago. In fact, more than 300 autophiles showed up to view his sketches for the LeMay—America's Car Museum.

After Grant presented, everyone was silent. "This guy in overalls—probably 60 years old, heavyset, tough looking—raised his hand," Grant says. "I don't know much about architecture,' the man said, 'but why can't it look more like a car? Why can't you put a bumper and headlights out front?'"

Grant, who had his own eponymous practice for a decade before co-founding Large Architecture, thought, "Oh, boy, here we go." Then he realized that the man had a point. He ditched his boxy design and started over, by not so much mimicking a car but by adding curves and a gleaming finish.

The crowd was even bigger for his next presentation, he says. "The same guy raised his hand and said, 'That's more like it.'"

A version of that design now rises above Puget Sound like the hood scoop of a vintage Ford Mustang. Inside the 165,000-square-foot museum are 350 vehicles, one-tenth of the Guinness World Records—honored collection of the late Washington refuse-company magnate Harold LeMay. Revamping the design was a bump in the road compared to Grant's next obstacle: getting the project built on a public-private partnership budget that shrank from a pie-in-the-sky \$180 million to a reality-bites \$20 million.

3,400

The approximate number of vehicles in the LeMay Collection at its peak. The number is now around 2,000.

SOURCE: LEMAY—AMERICA'S CAR MUSEUM

THE SEVENTH ANNUAL

R+D AWARDS

CALL FOR ENTRIES

New technologies are revolutionizing the process and product of architecture. To celebrate advances in building technology, ARCHITECT magazine announces the seventh annual R+D Awards. The awards honor innovative materials and systems at every scale—from HVAC and structural systems to curtainwall and digital technologies or programs to discrete building materials such as wood composites and textiles.

CATEGORIES

The awards will be judged in three categories, reflecting different stages of the research and development process:

- **Prototype**—Products, materials, systems, and software that are in the prototyping and testing phase.
- **Production**—Products, materials, systems, and software that are currently available for use.
- **Application**—Products, materials, systems, and software as used in a single architectural project or group of related architectural projects.

The jury will consider new materials, products, and systems as well as unconventional uses of existing materials, products, and systems. Entries will be judged for their potential or documented innovation in fabrication, assembly, installation, and performance. All entries will be judged according to their potential to advance the aesthetic, environmental, social, and technological value of architecture.

ELIGIBILITY

The awards are equally open to architects, designers of all disciplines, engineers, manufacturers, researchers, and students.

PUBLICATION

The winning entries will appear in the July 2013 issue of ARCHITECT, both in print and online.

EXTENDED DEADLINE

Friday, April 19, 2013
regular submission deadline (postmark)

Wednesday, April 24, 2013
late submission deadline (postmark; additional fee is required)

FEES

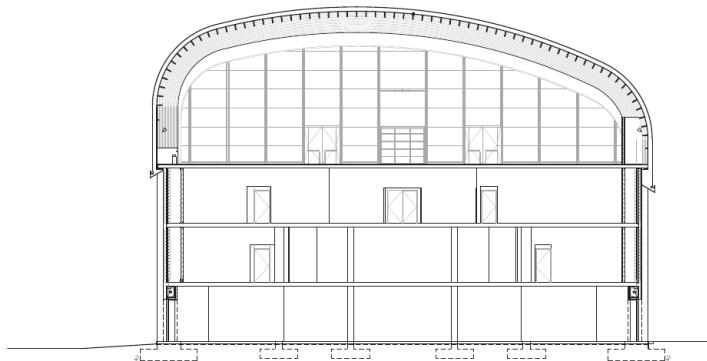
First entry: \$175 first entry
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Late entries: \$50 additional fee per entry by April 24, 2013. Submission requirements are available at rdawards.com.

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Transverse Section



The building roof shelters the museum's concrete structure, which includes four tiers of polished-concrete ramps, and spans a roughly 1-acre (400-by-110-foot) footprint. Nineteen glulam beams arc 104 feet above the exhibit floor.

Museums, like hospitals and other institutional buildings, tend to be expensive to build. But Grant didn't want convention to dictate his client's budget or his vision. Besides, this was a space to exhibit (read: park) cars. "Why can contractors put up a parking garage for \$60 or \$70 per square foot," he asked, "but they can't build a museum for less than \$400?"

His solution: an eye-catching silver shell over a parking deck that masquerades as a museum. "Visually, we tried to put emphasis and cost on the roof itself so that the concrete substructure [which includes three dozen 22-by-50-foot tilt-up panels] would not appear front and center," he says.

To make the budget work, Grant collaborated with Seattle-based engineering firm Magnusson Klemencic Associates (MKA) to design an attractive and efficient roof support structure from glued, laminated timbers, or glulam beams. Engineered by Western Wood Structures and crafted by American Laminators, the 19 massive curved beams, spaced 23 feet o.c., measure 8 3/4 inches wide by 52 1/2 inches deep and arc 104 feet over the exhibit space below.

Unlike the uniformity of a barrel vault, the front and rear of the asymmetrical roof taper slightly, and one side dips below the other. As a result, each of the 757 purlins (5 1/8 inches, spaced 4 feet o.c.) that forms the roof's secondary support had to be custom cut, and each purlin hanger angled uniquely. Plywood sheeting, 1 1/8 inches thick, covers the purlins; to conform to the 17-foot-radius roof curve, contractors sandwiched flexible 1/2- and 5/8-inch-thick plywood sheets to match the 1 1/8-inch thickness. Next came waterproofing—a self-adhered membrane sheet of rubberized asphalt by the metal roofing-system fabricator Bemo, topped by a waterproof mineral-wool insulation by Roxul.

For the roof finish, Grant looked to London's Thames Barrier, a rotating floodgate with nine concrete piers clad in standing-seam metal. "It's beautiful how they glisten in the low evening light," he says. "Tacoma has similar low sunlight."

Architectural Metal Works, in Tualatin, Ore., installed the Bemo 400, 18-gauge (.04-inch-thick) aluminum roof. Covering the 79,000-square-foot surface required 67,500 pounds of aluminum coil up to 110 feet long. Roll-forming the panels on site reduced transportation and labor costs. The machine-rolled, locking seams had enough give to suit the variable construction tolerances of the subtly undulating roof. All told, the 10-inch-thick roof system has an approximate R-value of 30, while the 14-inch-thick tilt-up walls come in at about R-21, thanks to batt insulation installed between the concrete and an interior steel-framed stud wall.

Once the foundation was poured, Grant says the structure went up in three or four months. Perhaps, most impressive, was that he delivered a museum for less than \$120 per square foot. "We wanted to design something very grand and simple at the same time," he says. "It was an opportunity to create something with the volume of a train station, where you can see it from a distance and understand the real aesthetic of the automobile."



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CHINA'S NATIONAL COMMITMENT TO CLEAN TECH IS BACKED WITH GOVERNMENT-IMPOSED ACTIONS. CAN THE U.S., MIRED IN POLITICAL INACTION, LEARN FROM THE STANDS?



DURING A 2010 VISIT to Shanghai, I had a memorable conversation with Eric Phillips, AIA, who leads the Shanghai office of NBBJ. As we traversed the Huangpu River from Pudong to Puxi by ferry—not an experience for the faint-hearted, given the number and pace of boats plying the crowded waterway—we discussed the future of China, which is striving to balance industrial development with environmental priorities. One benefit of China's top-down government, Phillips said, is that when its leaders want sustainability, rapid and decisive change happens.

The evidence is clear in China's national development priorities: alternative energy, energy efficiency, environmental protection, biotechnology, advanced IT, high-end manufacturing, and new-energy vehicles. Simultaneously, the nation's massive investment in college education will usher in a generation of knowledge-workers prepared to fulfill these priorities.

The results are staggering. In the last four years, China's government-subsidized production of solar panels grew 17-fold, causing the price of silicon-based PV panels to plummet and driving non-Chinese manufacturers out of business. China now manufactures nearly half of the world's solar panels.

Buildings stand to benefit directly from China's export of relatively inexpensive solar cells, as well as from the country's development goals. But not all news from China is rosy. Beijing's air pollution levels are 20 times that of the World

Health Organization limits. Chemical spills are not infrequent—the recent Handan incident that affected more than a million people is one in a series of disasters. Yet, the Chinese people's increased awareness of such problems is positive, as it intensifies pressure on the government.

In the U.S., environmental legislation remains politically controversial. "Climate change" was never mentioned by the candidates during the most recent presidential debates. Although the U.S. holds on as a leader in clean technology, lukewarm government support and stiff competition from subsidized fossil fuels have hampered development. As a result, many domestic innovations have moved overseas—as the recent buyout of U.S. solar cell manufacturers by Chinese companies exemplifies. But with nearly two-thirds of U.S. voters supporting government action against climate change, sustainability might figure more prominently in our country's future priorities.

Meanwhile, China's struggles could be a lesson for the U.S. Does sustainability require a minimum amount of time and investment, regardless of a nation's political system, economic health, or will? Are we doomed to years of further environmental damage before a radical transformation in global industrial operations occurs? China's path to green, for one, mirrored our ferry ride across the Huangpu: a slightly harrowing experience that ultimately delivered results.

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The estimated cost per watt of electricity generated by a crystalline-silicon solar panel from China in 2016—a 67% drop in price from 2009.

SOURCE: GTM RESEARCH, GREENTECH MEDIA



Text by **Blaine Brownell, AIA**

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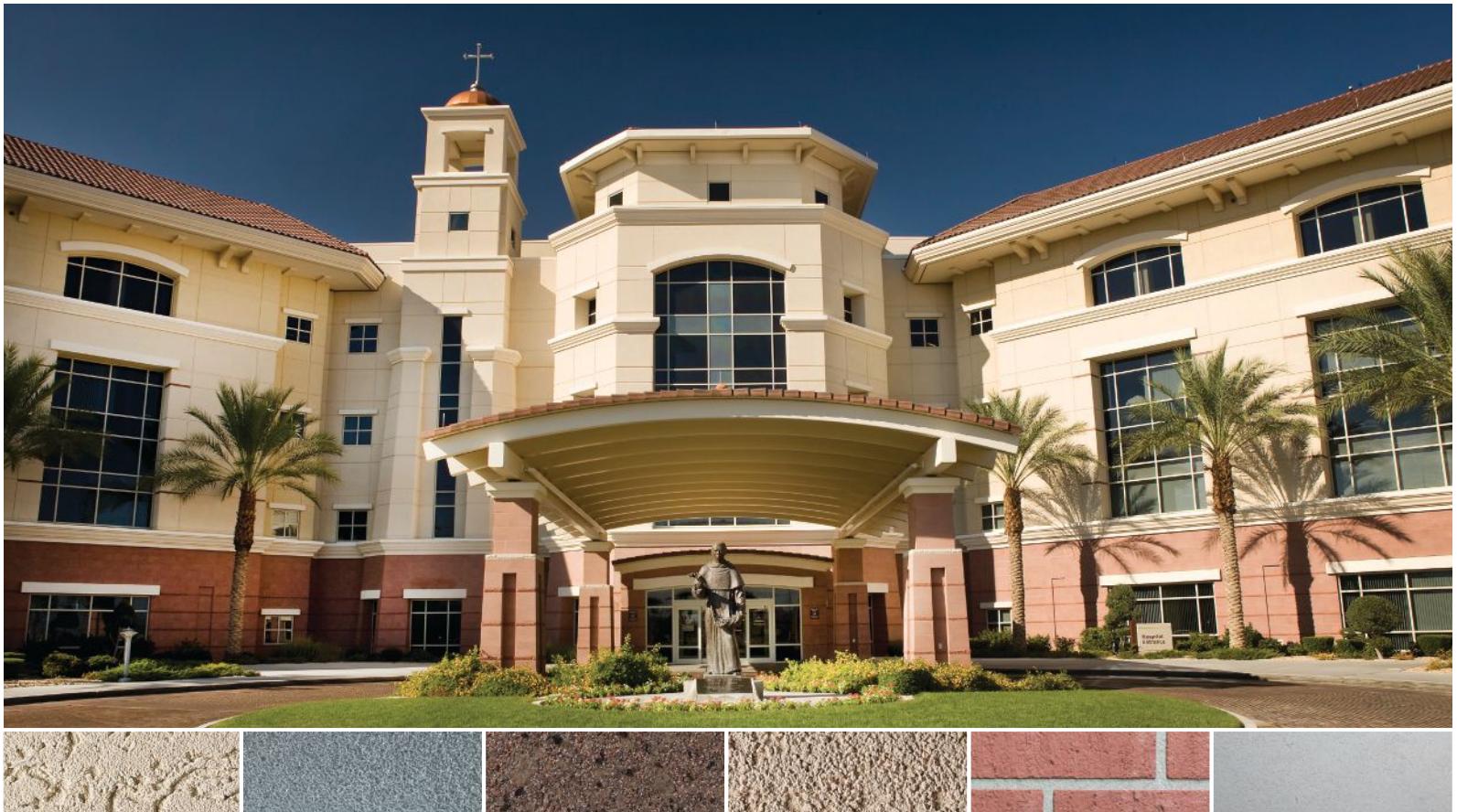
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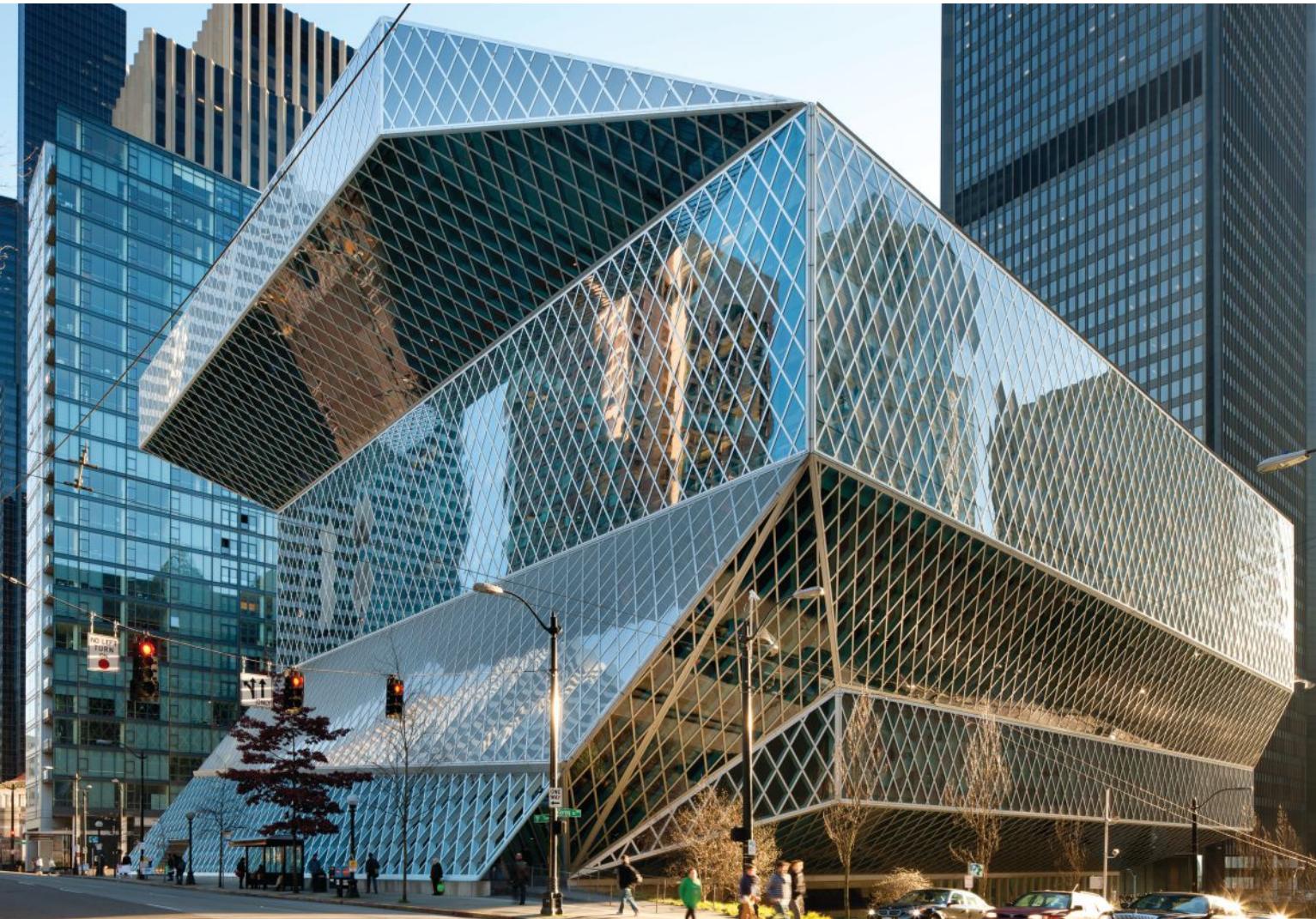
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CENTER

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Visitors take photos inside OMA's 2004 Seattle Central Library. To read Witold Rybczynski's essay comparing the library with its lesser-known contemporary, BCI's Seattle City Hall, turn to page 76.



The Seattle Central Library, designed by OMA with LMN Architects, opened in 2004 amid glowing tributes from critics. Two million visitors enter its doors each year, a quarter of whom are tourists.

POST OCCUPANCY

OVEREXPOSED

REM'S SEATTLE LIBRARY HAS GOTTEN ALL THE HYPE. BUT A QUIET, CONTEMPORARY BUILDING JUST DOWN THE STREET MAY PROVE TO HAVE THE MORE LASTING LEGACY.

Text by **Witold Rybczynski, Hon. FAIA**
Photos by **Lara Swimmer**

I RECENTLY VISITED two civic buildings in Seattle that are now almost a decade old: Central Library, designed by Rem Koolhaas and Joshua Prince-Ramus of OMA, and City Hall, designed by Peter Q. Bohlin of Bohlin Cywinski Jackson. Why bother to write about these buildings now? When the library opened in 2004, *The New York Times* critic Herbert Muschamp called it "the most exciting building it has been my honor to

review." City Hall, just a few blocks away, earned no such acclaim when it opened the following year, and to this day it remains a well-kept secret.

Has the library lived up to its initial fanfare? And has a very good building in City Hall been overshadowed by its more celebrated neighbor? I came to find answers to those questions, believing that it's best to judge buildings in the fullness of time, when the rough edges have been worn smooth and it's possible to assess the durability—aesthetic as well as physical—of the design.

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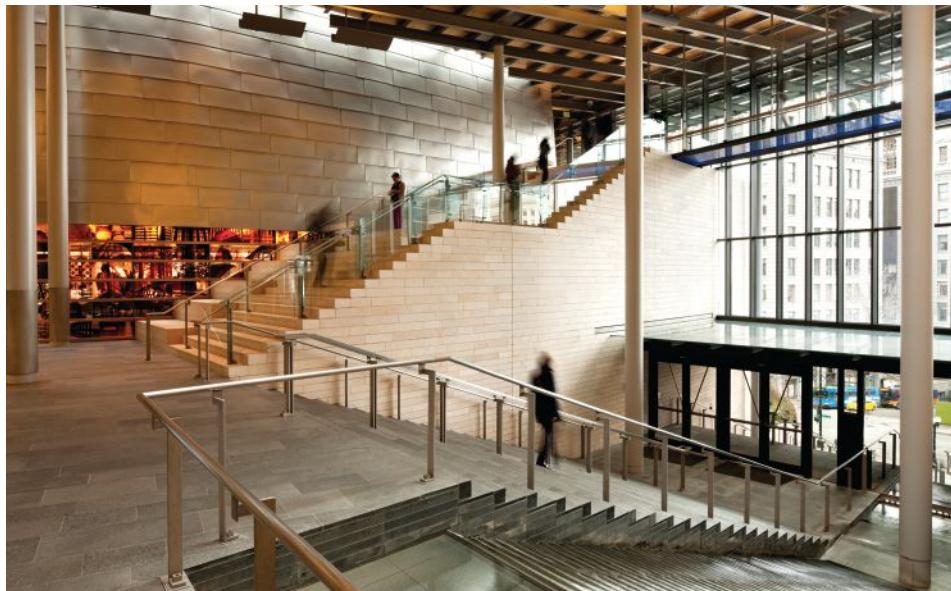
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Seattle's City Hall, designed by Bohlin Cywinski Jackson with Bassetti Architects, features a grand exterior stairway (top) that leads to a light-filled entrance (bottom) with a notable absence of ID or bag checks.

This flies in the face of our current obsession with the new-new thing. The mere announcement of a competition short list is "news." Buildings are given the thumbs-up—or down—on opening day, prior to being put into use. Projects are rated "green" irrespective of actual performance. And design awards are bestowed on buildings even before they are built. Pause to consider how unusual that is—as if Oscars were awarded for unfilmed screenplays, or the Pulitzers included a category called Best Book Proposal.

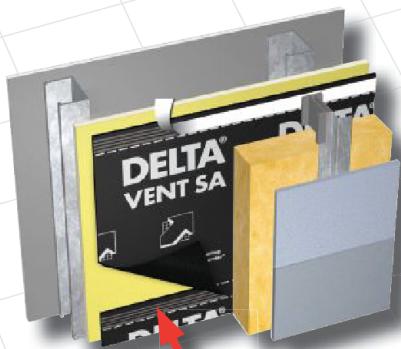
The architects for the library and City Hall were both selected in the summer of 1999. Library administrators narrowed a field of 29 contestants to five—a balanced mix of two big names, two tyros, and an established regional firm. The process got off to a rocky start when the big names—Norman Foster and Cesar Pelli—dissatisfied with the selection process, withdrew and, following a lackluster presentation, Portland-based Zimmer Gunsul Frasca was eliminated.

That left the tyros. Both in their 50s, neither Steven Holl nor Rem Koolhaas had a large portfolio of built work, although both were favorites of what a Seattle journalist called "the black-turtleneck crowd." Following three days of well-attended public presentations, Koolhaas got the nod. The iconoclastic Dutchman did not disappoint, producing a design consisting

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CITY HALL BLENDS WITH ITS SETTING
AND DOES NOT PHOTOGRAPH WELL,
AND I SUSPECT THAT ITS SUBTLE CHARMS ARE
APPRECIATED ONLY GRADUALLY, OVER TIME.
THIS IS SLOW ARCHITECTURE.

of superimposed platforms in a huge prism-shaped greenhouse. The unusual “uniting of hip with pragmatic” as *Architectural Record* put it, was an immediate sensation.

The city hall project was overshadowed from the start. Public wrangling between Mayor Paul Schell and some members of the city council delayed the architect selection process, and when the short list was announced, it seemed an anti-climax after the exciting head-to-head competition between Holl and Koolhaas. The closest on the list to a firebrand was Antoine Predock, an architectural maverick with a flamboyant style that was popular in the Southwest, although it seemed an odd fit for Seattle. John and Patricia Patkau were less well-known, but, being based in nearby Vancouver, British Columbia, were almost local.

The sleeper was Peter Bohlin. A seasoned practitioner like Predock, he was best-known for exquisitely detailed houses, including a sprawling estate for Bill Gates on Lake Washington. *The Seattle Times*, which had called Koolhaas and Holl “sexy, jet-setting, international designers about whom civic boosters dream and major magazines write,” referred to Bohlin’s public presentation as “subdued”—which is also a pretty good description of his architecture.

The wrangling between the mayor and the council continued even after Bohlin was selected, which cast a pall over the project. Whereas the opening of the library was extensively covered by the world’s media, led by Muschamp’s rave review, City Hall was ignored. My search of the Avery Index did not turn up a single review of City Hall by the major architectural press, only a brief news clip in *Architectural Record* that referred to the proposed design as “transparent and pragmatic,” which seems a step down from “hip and pragmatic.”

That wasn’t how the mayor saw it; Bohlin’s unaffected approach is exactly what attracted him. Schell, who had served as dean of the University of Washington’s College of Architecture and Urban Planning, followed architecture and was familiar with Bohlin’s work. “I knew the Gates house as well as a recent building at the University of Washington, so I had a good feel for what Bohlin would bring to the table,” he told me. “You really want someone who is a little old shoe, and will last on the shelf.”

So, how has the old shoe worn? The quartzite floors, limestone and titanium walls, fir and maple paneling, glass railings, and stainless steel everything else look much as they must have on opening day eight years ago, as I discovered on my recent tour of the building. The “stream” that crosses the city hall lobby, and cascades beside a grand exterior stair to the lowest part of the steeply sloping site 40 feet below, fills the interior with a pleasant gurgling sound. The sky-lit lobby has been described as a public agora, and I watched people wandering in and out of it at will. No one was opening bags or asking for IDs. Elevator access is unrestricted. City Hall was designed in the immediate aftermath of the 1999 WTO protests, the so-called Battle of Seattle, as well as 9/11. What must have been a difficult decision—to create a transparent, welcoming building rather than a bunker—is now fully vindicated.

Bohlin’s design exhibits an old-fashioned sort of Modernism, in which the plan explains itself as you move through it—the council chamber here, the offices over there. The structure is comprehensible, and care is lavished on construction. Bohlin belongs to the details-should-show-how-things-are-made school, but unlike Renzo Piano, he is a bit of a mannerist; planes slide by other planes,

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In OMA's library, patrons gather at a table amid the book spiral, which connects four floors of bookstacks via gently sloped ramps. Dewey decimal numbers are noted on the floor.



S.I.M. Architects; Photo by Paul Mullins

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materials are layered upon each other, and odd junctions abound. This casual approach has been compared to that of Gunnar Asplund and Sigurd Lewerentz, early Swedish modernists whom Bohlin admires, and it serves to humanize the architecture.

Good buildings don't just fulfill existing functions, they suggest new ones. A large room designed for overflow crowds during council meetings has turned into a well-used public meeting space. The large plazas that step down the hill on the west side of the building, designed by landscape architect Kathryn Gustafson, have become a favored locale with free lunchtime concerts and a weekly farmers market in the summer. At the recent historic same-sex marriage ceremony performed in City Hall, the couples descended the grand exterior stair amid cheers, flowers, and confetti. One area that has yet to find a use is an empty "multipurpose space" at the base of the building. A long ruby-red glass wall that casts an eerie glow and creates a spooky atmosphere on the interior, and on the exterior, struck me as a feeble effort to inject glam into the design.

I asked my city hall guide why he thought the building had received so little attention in the media. "When City Hall opened, the emphasis was put on its green features," he said, "which is not very sexy." The building, which received a LEED Gold rating, claims a 24 percent reduction in energy use; although a projected solar array was never installed, there is a large green roof as well as a monst

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water tank in the basement. It's true that reduction in stormwater runoff doesn't stir the imagination, but I think it's more than that. This low-key building, adjusted to its site and its surroundings, paying deference to the 2002 Justice Center across the street (designed by NBBJ), carefully stepping down the hill, and taking advantage of views of Elliott Bay, is the opposite of an icon. City Hall blends with its setting and does not photograph well, and I suspect that its subtle charms are appreciated only gradually, over time. This is slow architecture.

No one has ever described Rem Koolhaas as slow. The Seattle Central Library perches uncomfortably on its sloping site—no places for outdoor lunches here—although I suspect the awkwardness was intended. It's that sort of building: startling, in-your-face, challenging conventions, a prickly presence amid the downtown skyscrapers (and very photogenic). The library looks like a giant piece of urban infrastructure, an impression heightened at night, when the crisscrossing trusses of the bridgelike structure are apparent inside the faceted, glowing lantern.

Although the glass skin appeared grimy the day I visited, on the whole the library doesn't show its age—but for different reasons than City Hall. Koolhaas and Prince-Ramus had a smaller construction budget (less than \$300 per square foot, compared to \$363 per square foot for City Hall), and they opted to spend it on structure and space, rather than on materials and detailing. The interior finishes are downright cheap: sheetrock; bare concrete; exposed, sprayed fireproofing; and an acoustic ceiling that looks like it's made from old sleeping bags. As for elegant details, well, there aren't any. This is a building where the reading room and the service basement are equally bare-bones.

This very roughness works to the building's advantage, however. Like all big-city libraries, and perhaps more than most, the Seattle library is a hangout for the homeless and young downtowners—given Seattle's grungy dress code, it can be hard to tell them apart. Yet, everyone looks at home—the tough, no-frills interior neither patronizes nor intimidates.

Last year, the library had 2 million visitors, which is remarkable for a city the size of Seattle (the mighty New York Public Library had 2.3 million). The wear doesn't show—there's not much that you can do to a polished concrete floor, nylon carpeting, and galvanized-metal balustrades that resemble floor grates. The unusual, stainless steel floor tiles in the reading room are scratched up, but that only enhances their industrial chic, although I thought that the sulfurous chartreuse escalators and elevators

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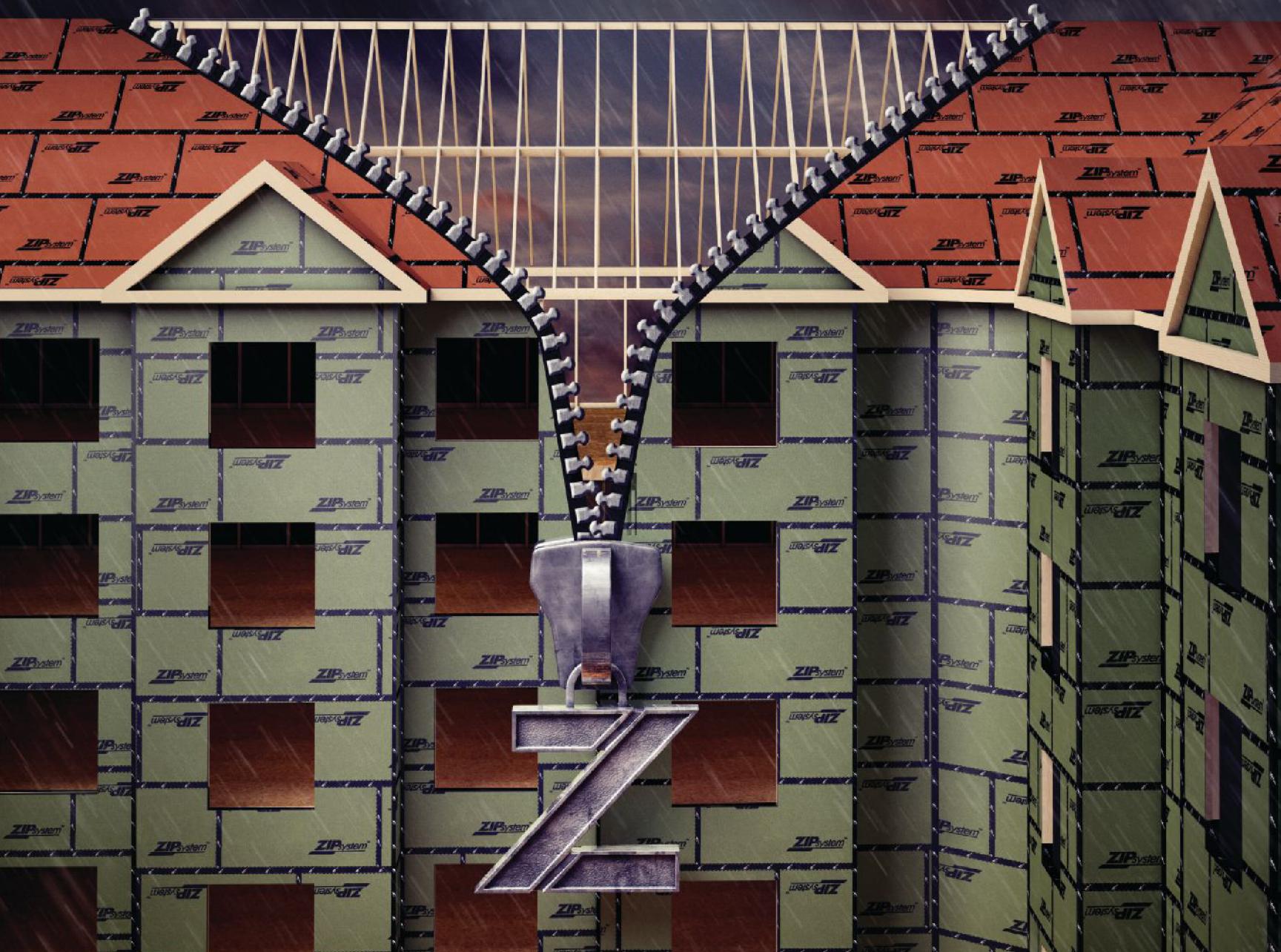
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were starting to show their age. One feature that has fallen victim to intensive use is the trendy upholstered foam furniture that I remember from a previous visit; it has been replaced by PVC seating that resembles Adirondack chairs. As I sat making notes, it struck me that while the vertiginous, Escher-like interior was as stimulating as ever, it could also be overwhelming, which was not particularly conducive to concentration. A little calm would not have been out of place.

The ramped, spiraling bookstacks were widely heralded when the building opened, although none of the librarians I spoke to could think of a single library that has recently adopted this unusual feature, which now seems more like a gimmick than a real innovation. But there is no doubt that the striking, faceted glass building is a hit with the public. And not just library-goers; a quarter of the visitors are tourists, for the library has joined Pike Place Market and the Space Needle as one of Seattle's must-see sights. Although the librarians who showed me around boasted of their building's popularity, it's unclear that the experience of using a public library is actually enhanced when it doubles as a tourist attraction.

What difference does a decade make? Both buildings can now be appreciated in the fuller context of their architects' subsequent work. Koolhaas's hard-nosed interior takes its place with the Porto concert hall and Milstein Hall at Cornell, and his pursuit of eye-catching building forms has continued with the CCTV headquarters in Beijing. Bohlin's self-styled "soft Modernism" has found further expression in several campus buildings, a federal courthouse, and a studio for Pixar, although he has also produced unexpectedly iconic designs for Apple stores in New York and Shanghai.

In many ways, the library and City Hall represent two different faces of Modernism. Koolhaas's design is a freely structured, contemporary version of a civic monument, a modern counterpart to Carrère & Hastings's New York Public Library. Much like that landmark, the Seattle library is a building of its time—although of a different time. It's rough and chic, glamorously gritty, and fashionably unconcerned with hierarchies and traditional architectural virtues.

Bohlin's City Hall is different; it doesn't put on airs. After spending a day in the building my chief impression was of craftsmanship, unruffled calm, and an even-handed sense of balance—a veritable civics lesson in glass, maple, and natural light. In a culture that is intrigued by novelty and glamour, it is perhaps inevitable that chic would trump craft. But given several more decades, I'm not so sure. I wouldn't discount the staying power of well-made old shoes.



Top: The chartreuse elevators in the library, hip in 2004, seem a little dated now.

Bottom: A walkway in City Hall, designed by the architect James Carpenter, connects council offices and chambers.

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CRITIQUE

THE ART OF PATRONAGE

MIES AND JOHNSON WOULD NEVER HAVE GOTTEN TO WORK ON THE SEAGRAM BUILDING IF NOT FOR PHYLLIS LAMBERT. HER NEW BOOK DEMONSTRATES THE COMPLEXITY—AND IMPORTANCE—OF THE ARCHITECT AND CLIENT RELATIONSHIP.

Text by Christopher Hawthorne



Philip Johnson, Ludwig Mies van Der Rohe, and Phyllis Lambert discuss the Seagram in front of an image of the building model soon after she helped the architects win the commission in 1955.

IN THE SUMMER OF 1954, a 27-year-old aspiring artist from Montreal sat down in her Paris apartment to type out a letter to her father. Her name was Phyllis Lambert. Her father was Samuel Bronfman, founder of the giant liquor company Joseph E. Seagram & Sons.

Filling eight single-spaced pages, the letter was annotated in the margins with handwritten corrections, additions, and architectural sketches. It is reproduced in full as an appendix to a new book by Lambert, Hon. FAIA, which is called, simply, *Building Seagram*, published by Yale University Press in April.

In the letter, she tries to convince her father that he is about to make a monumental mistake—that his plan to build a corporate headquarters for his company at Park Avenue

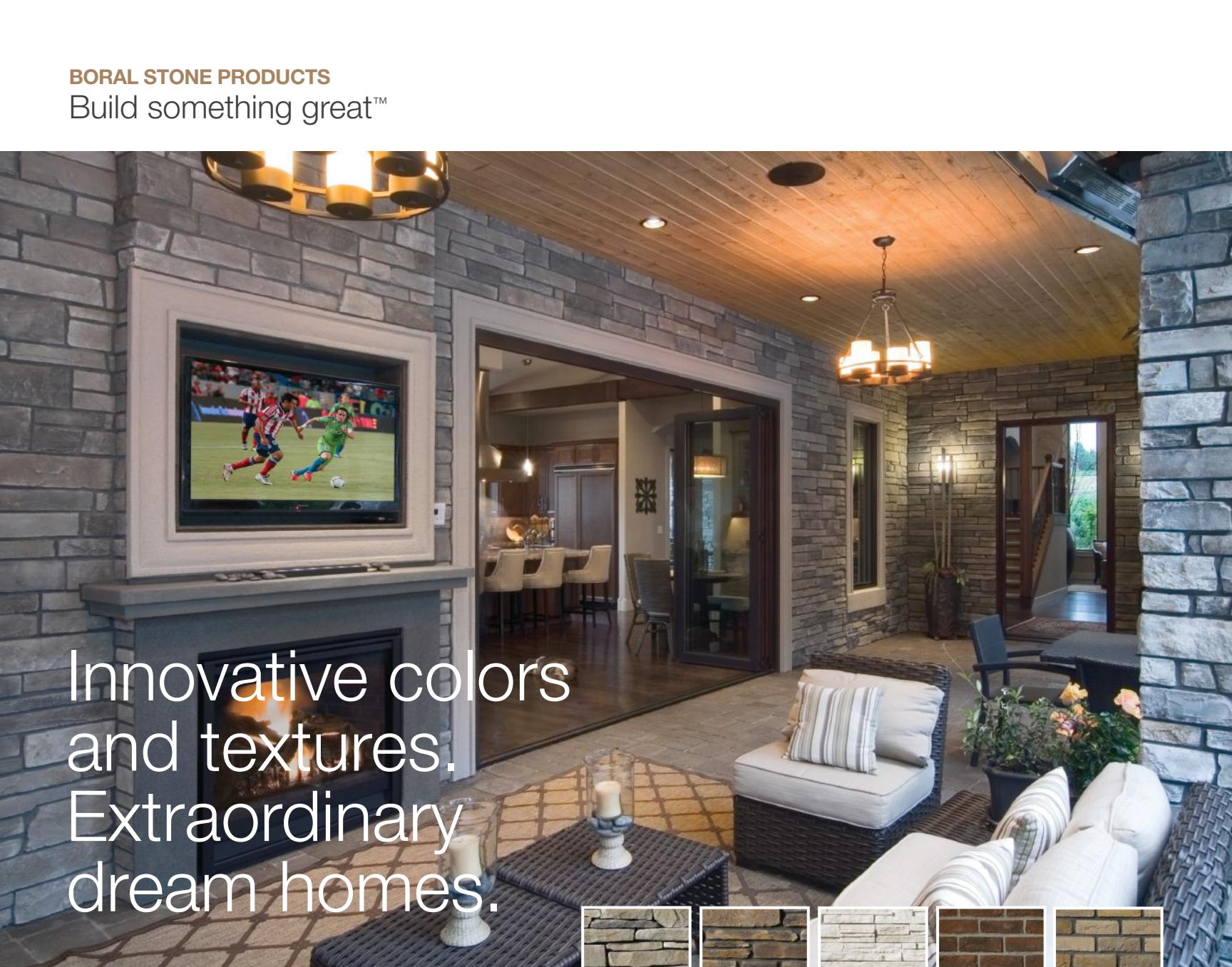
between 52nd and 53rd streets in Manhattan is insufficiently ambitious, and that he ought to abandon it immediately. The proposed scheme, a copy of which Bronfman had mailed to his daughter a few weeks earlier, called for a 34-story tower in a style that he referred to proudly as “Renaissance Modernized.” It was to be designed by the Los Angeles–based firm Pereira and Luckman.

“This letter starts with one word repeated very emphatically NO NO NO NO NO,” Lambert wrote. “I am very disturbed and find nothing whatsoever commendable in this preliminary-as-it-may-be plan for a Seagram’s building.”

After criticizing the historical references in the proposed building as trite and saccharine (“you can’t modernize the Renaissance—you

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The Seagram shortly after its completion in 1958, as photographed by Ezra Stoller.

can only *learn from it*"), Lambert, the second-oldest of Bronfman's four children, appealed to her father's vanity and sense of his own legacy.

"You must put up a building which expresses the best of the society in which you live, and at the same time your hopes for the betterment of this society," she wrote. "You have a great responsibility and your building is not only for the people of your companies, it is much more for all people, in New York and the rest of the world."

Lambert, who would go on to help found the Canadian Centre for Architecture in 1979, donating 750,000 shares of Seagram stock to finance it, was not close to Bronfman. In the book she refers to him as "SB" to suggest some of that distance.

"My contact with my father up to 1954 had been minimal," she writes. "He considered only his sons to be in the line of business succession, and as a child with a strong aversion to all talk about business and money, I was a self-imposed outsider, immersed in art, committed to sculpture by the age of nine, constantly daydreaming about becoming an independent artist."

About her childhood, she adds, "My father was for all intents and purposes physically absent; his strong personality and fierce temper terrified his children."

Their relationship had begun to thaw, however, by the time Lambert sat down to write to him about the Park Avenue tower. Earlier in 1954 she had taken her father to Rome to see some of the city's great landmarks, a trip that was also part of her own effort to study architectural history first-hand. And something in the letter struck a chord—or a nerve—with her father. After receiving it he immediately summoned her back to New York.

THE FIRST TASK he set out for her was to choose the marble for the ground floor of the Pereira and Luckman building. But rather quickly Bronfman acceded to her notion of starting the design process from scratch. And by the end of the summer she'd been given the task of overseeing the search for a new architect.

Ultimately, of course, after consulting with the critic Lewis Mumford and other advisers, and considering a list of contenders including Marcel Breuer, Paul Rudolph, and (most seriously) Le Corbusier, she convinced her father and his colleagues to hire Mies van der Rohe. Mies produced for the company one of the great masterpieces of purist Modernism in America, a 38-story, 515-foot-high tower of smoky bronze and dark glass that is set magisterially back from the street with a wide granite-edged plaza at its feet. Along with the 1952 Lever House, located just down the street

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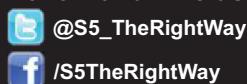


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In December 1956, construction on the Seagram was about halfway done, with 38 floors framed out, glass inserted on the seventh floor, and bronze mullions attached up to the 14th floor.

and designed by Gordon Bunshaft of Skidmore, Owings & Merrill, it ranks as one of the finest skyscrapers produced anywhere in the world in the decades after World War II; perhaps more than anything, it is a building of almost impossible poise.

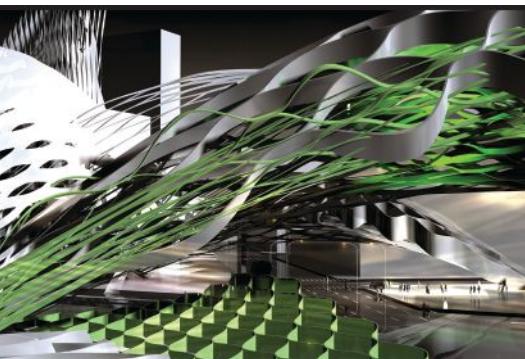
Lambert's book is an exquisitely detailed (sometimes over-detailed) chronicle of how the skyscraper came to be: how Mies applied the lessons of his great Chicago buildings to his first New York tower, nearly perfecting the curtainwall as the face of the modern office tower; how he managed a collaboration with the much younger Philip Johnson, who oversaw the design of the Four Seasons restaurant; and how the relationship between the building and the plaza, and in turn the plaza and the sidewalk, is so carefully calibrated.

Most books of this sort, which aim to tell the biography of a building, or how its architecture evolved, don't bother to stick around to explain how the structure operates once it's finished, or how it is received by the people who use it or by the public at large. Lambert does all of that, along with spending a great deal of time examining the public art inside and in front of the building, which includes a giant stage curtain by Picasso, *Le Tricorne*, in the Four Seasons. MoMA's Barry Bergdoll, in his foreword to the book, says Lambert "broadens the aperture" of the building monograph.

BUT THE TRUE VALUE of the book lies elsewhere—namely, the degree to which it is a study of architectural patronage, one of the most underexplored topics in the profession. Architects and critics alike talk all the time about how the best buildings in any firm's portfolio can be traced back to a productive, if not always placid, relationship between architect and client. And plenty has been written about the personalities—typically oversized—of the great impresarios and patrons in architectural history, from the Medicis to a contemporary figure like Thomas Krens, who helped make the Guggenheim Museum synonymous with globe-hopping architectural ambition.

When it comes to the science and psychology of patronage, though, to dissecting the particulars of the give and take between architect and client that has produced our most important landmarks, the record is remarkably thin. Lambert's, in fact, is one of the few scholarly books I know of that is written from the client's point of view.

We should always be careful not to suggest that a simple equation—smart client plus brilliant architect equals great building—controls this process. As Lambert makes clear



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in *Building Seagram*, many top executives in the company, not just her or her father, played key roles in shaping the design of the building; and she is at pains to document the precise nature of Johnson's contributions, along with those of the lighting designer Richard Kelly. Architecture firms and corporations are both many-headed beasts, and it's in the sometimes

unwieldy struggle between those beasts that architecture is created.

Lambert, for her part, is never quite able to commit to calling herself the single or lead client for the Seagram building; the closest she comes is to qualify the word by putting it inside quotation marks, describing her role as "identifying the architect [and] serving as

director of planning and, in effect, as 'client.'

But in other ways she is quite clear about her role. For her father, she writes, "The Seagram Building was to be more than a company headquarters: I believe he came to see it as a monument to ... his company, which was his own doing, and therefore, ultimately, a monument to himself. But these desires were latent and needed to be articulated."

In the end, she writes, "I was able to catalyze my father's vision." I think she could have done without the quotation marks in describing her role as client, as the book is one long and generally persuasive argument about the centrality of the part she played.

And it raises an obvious question: Where are the other books on architects and their patrons, the studies of how clients can ruin or improve a firm's work? The need for such titles seems obvious, especially in an age when leading architects are so globally prolific, and when the quality of their massive output varies so widely.

SINCE READING LAMBERT'S BOOK, in fact, I've begun imagining a kind of parlor game involving architects and their patrons: Take a famous contemporary architect; rank his or her major projects in order of quality—or value, or impressiveness, or whatever metric of achievement you are most comfortable with; then rank his or her clients by level of, well, let's say architectural intelligence. You will be surprised how often the two lists match up precisely.

Start with Renzo Piano, Hon. FAIA. His best American project, by a large margin, is the Menil Collection in Houston, where Dominique de Menil, in the 1980s, compelled him to adapt his already-softening high-tech style to her existing and careful vision for the museum's campus in a low-rise Houston neighborhood. When I met Piano recently for breakfast in Los Angeles, I was halfway through Lambert's book. I asked him near the end of the meal who his best client had been. "In America?" he replied. "Dominique de Menil. Very strong lady. Smart. She knew what she wanted."

Piano's most disappointing American designs, on the other hand, include the Broad Contemporary Art Museum at the Los Angeles County Museum of Art, where Eli Broad gave him a punishing budget to go with an accelerated construction schedule—sidelining the nominal client, LACMA director Andrea Rich. And with the forthcoming Whitney Museum near the High Line in Manhattan, the Whitney board's quest for more square footage and a less stodgy location has led Piano to cartoonishly expand his approach, rather than focusing it or paring it down.

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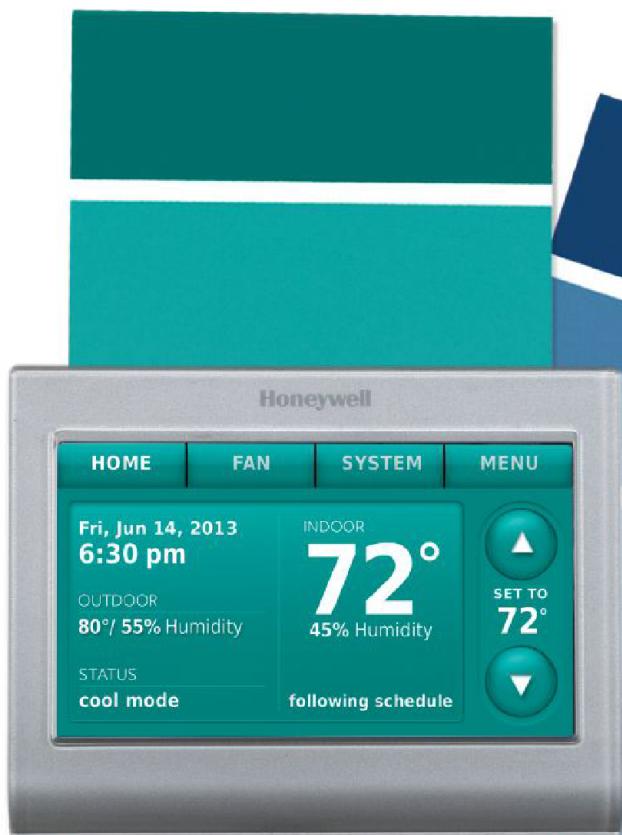
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IT IS A CLICHÉ, OF COURSE, TO SAY THAT GOOD BUILDINGS COME FROM GOOD CLIENTS AND SIMPLY LEAVE IT AT THAT.

Or try Frank Gehry, FAIA. For distracted, deep-pocketed clients like Paul Allen, he's produced disappointing and uneven buildings, such as the Experience Music Project in Seattle. Meanwhile, his Walt Disney Concert Hall, serially delayed and ever in doubt, was sharpened in the end to a brilliant result by three major figures on the client side: Lillian Disney, representing the donors; and the L.A. Philharmonic's Ernest Fleischmann, and his successor Deborah Borda, representing the orchestra.

You can continue the list nearly indefinitely. Of the half-dozen houses Frank Lloyd Wright designed in and around Los Angeles, the finest by far is the Millard House in Pasadena, built for a client Wright had already worked with in Chicago, Alice Millard. Why is the Eames House better than every other building by Charles and Ray Eames? Because in that case Ray was Charles's client, and Charles was Ray's.

Why is Rem Koolhaas's library in Seattle a finer achievement than Brad Cloepfil, AIA's museum there? Because Seattle's chief librarian, Deborah Jacobs, not only knew what she wanted in a library but crucially how architecture might be enlisted to deliver it, while the Seattle Art Museum was too busy concocting a complicated real-estate deal with Washington Mutual to focus on the particular details of the architecture of its new wing.

IT IS A CLICHÉ, of course, to say that good buildings come from good clients and simply leave it at that. What we need is an attempt to get past that commonplace phrase and to begin to understand how these relationships evolve, as well as the particular combination of negotiation, willfulness, and good fortune that creates lasting architecture. (As Lambert writes, "*Building Seagram* is not a story of architectural or corporate power plays but rather one of unlikely convergences, extraordinary coincidences, and ironic turns.")

In large part, this attempt should be seen as part of the broader and ongoing critique of the architectural superstar—the idea, obviously simplistic and yet supremely seductive, that buildings are created by individual visionaries working in isolation, drawing up genius building plans on napkins or scraps of paper lying around the studio.

Just as structural engineers have begun to step out of the shadows in recent years, with figures like Cecil Balmond making the case for the importance of their role, so should clients get some fresh attention as key actors in architecture.

Lambert's chronicle suggests that clients have an impact on the design process not in an unwavering, steady way, but at a few key stages,

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A spread from *Building Seagram*. In the photo on the right page, Mies and other building committee members visit the site in July 1956 as it was under construction.

or inflection points, in a building's development. The first and most crucial is simply in finding the appropriate match between architect and project. "Today's intense competition among corporations and developers to hire 'signature' architects was not yet in play" when she took over the selection process for her father, Lambert writes.

Today I am continually amazed by how often clients, even otherwise very savvy ones, pick prominent or fashionable architects who by personality or approach make a terrible match for the commission at hand. Lambert chose Mies in large part because she knew his ambition at that point in his career mirrored her father's: He wanted to design the definitive postwar office tower just as Bronfman wanted to produce the definitive modern corporate headquarters, what he hoped would be the "crowning glory" in the careers of everyone involved. And constitutionally the two men—cool, reserved, decisive when necessary—made a good pair. When she introduced her father to Mies, she brought along her mother and Johnson, who both spoke German. The architect and the businessman, she writes, "took each other's measure with genuine respect."

Lambert's other key contribution was to argue for the added expense of certain materials or design elements that Mies considered central to the tower's character but that were hard to justify to the accountants inside Seagram—and to judge when the exact time to make that argument had arrived. These features included the custom-made, 6-inch-deep bronze mullions on the façade (which Mies compared in look and feel to an old penny, and which darkened over time) and the particular, unusually spacious dimensions of the plaza. In the scheme of things, those details may seem modest; but together, as Lambert writes, they gave force to the final product—"the dark building in the city wedged at ground level, inside and out, to human presence and activity."



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Text by Lisa Findley

Photo by Ian Allen

NATALY GATTEGNO, 35, and Jason Kelly Johnson, 39, founded their practice in 2003 with a name that embodies their multiscaled, wide-ranging ambitions: Future Cities Lab. The firm, based in San Francisco, and with an outpost in Gattegno's hometown of Athens, Greece, is harnessing sophisticated technologies to address pressing urban issues such as migration and population growth, food and energy shortages, extreme and unpredictable weather, and rising sea levels.

The two partners, who got married after meeting as students at the Princeton University School of Architecture, view the city as a complex ecology and the role of the architect as being grounded in ethics. "Our projects evolve from thinking about how cities should be," Gattegno says. "We experiment to envision the future."

The setting for these experiments is a loft in the semi-industrial Dogpatch neighborhood of San Francisco. The space—part conventional office, part electronics lab, part workshop—is a study in ordered chaos. "All our fabrication is done in-house," Gattegno says. "We love experimenting and making things."

Cabinets full of wires, circuit boards, and actuators line the walls, as do bins piled high with hammers, pliers, screwdrivers, and other tools. A freestanding clean room houses a CNC router and a laser cutter. The partners view every project, model, and competition as an opportunity to explore unconventional and leading-edge technologies. "We are firm believers in the necessity of design research and speculative practice," Gattegno says. "In fact," Johnson adds, "we have structured our lives around this."

To support their burgeoning practice, both partners teach architecture at the California College of the Arts. Gattegno and Johnson have collaborated with various

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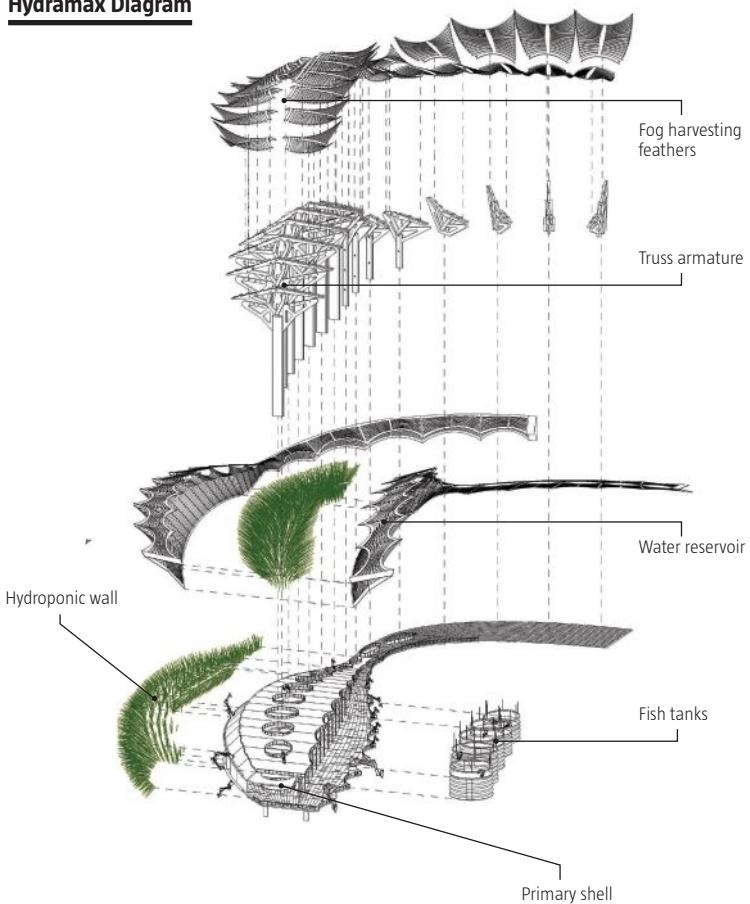
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experts—material engineers, computer interface designers, and paleobiologists—as they have pursued a range of efforts: design/build projects, the prototyping of digital and electronic technologies, and beta-testing in many contexts, including a small host of gallery installations and temporary structures. Johnson also collaborated with architect Andy Payne to design Firefly, a set of software tools that augments the design capabilities of Grasshopper (a free Rhino plug-in).

The firm has won its share of honors, including the Architectural League's 2011 Prize for Young Architects and Designers, and the partners were named 2009 New York Prize Fellows at the Van Alen Institute. Visionary practices such as Future Cities Lab can make profound contributions to architecture by shifting and expanding how we understand the boundaries of the discipline. But the firm's biggest challenge remains: How to segue from more-or-less pure experimentation into the design and construction of actual buildings—a transition that Gattegno and Johnson's former professors at Princeton, Jesse Reiser, AIA, and Liz Diller, once made themselves.

"Our practice model is inspired by practices like Reiser's and Diller's that are research driven and speculative. Both of them pushed and pushed until the work was material, spatial, public, and urban. In each case, the body of research aggregated to produce a very potent kind of architecture," Johnson says. "In the end, we want to make space, to make buildings. We love the challenge of actually making what we are thinking about, of getting down to the details and imaging how it happens in time and space."

Hydramax Diagram



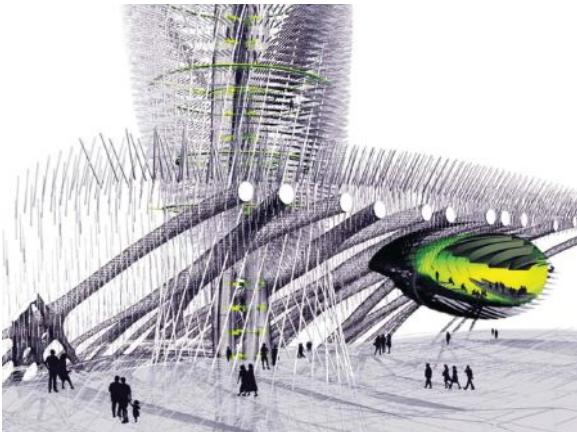
Hydramax Port Machines: Exhibited at the San Francisco Museum of Modern Art as part of a 2012 show entitled “The Utopian Impulse,” Hydramax is a proposal for how the San Francisco waterfront can respond to rising sea levels. Rather than barricade the city with dykes and seawalls, Hydramax offers soft tidal edges with responsive, biologically inspired architecture—aquatic parks, gardens, and wildlife refuges—that harness the water for drinking, power, and food production. The model displayed at the museum incorporates motion sensors that, when triggered by visitors, cause featherlike solar collectors and fog-catchers to wave slowly in the air.



Datagrove: A social media “whispering wall,” as the architects describe the project, Datagrove was exhibited last year outside the San Jose, Calif., opera house. The installation monitors trending Twitter feeds in Silicon Valley and, when visitors approach, broadcasts them on LCD displays and over speakers. The firm designed and fabricated all the digital and electronic equipment and actuators.



Super Galaxy: This post-apocalyptic reimagining of Trump Tower in New York City is, in classic visionary fashion, both fantastical but also grounded enough in pragmatics—with a workable structure and scale drawings—to make it seem like a real possibility. A nomadic dwelling with sleeping pods and a suspended hostel, the architectural system harvests rainwater and captures wind energy.



Energy Farm: Designed for a 2005 competition in Seoul, South Korea, Energy Farm explores the role of architecture in the city's physical, cultural, and environmental ecosystems. The hypothetical structure uses responsive site technologies to enhance and boost its environmental and energy performance, making it responsive to user needs on a microscale.



Glaciarium: Exhibited at the Van Alen Institute in New York in 2009, Glaciarium reflects the firm's engagement with responsive digital technologies, experimental materials, and environmental issues—namely, climate change in the Arctic. A block of ice inside the irregularly shaped structure, covered with a plastic skin, slowly melts—the sound amplifying and speeding up when visitors approach.



Aurora: Also designed for a 2009 exhibition at the Van Alen Institute, Aurora, like Glaciarium, highlights the global warming crisis. The exhibit, composed of a web of cables, LEDs, and tensile elements, is a spatial representation of the Arctic landscape that includes real-time data on ice field movement. The project lights up in response to viewers—a metaphor for our complicity in climate change.

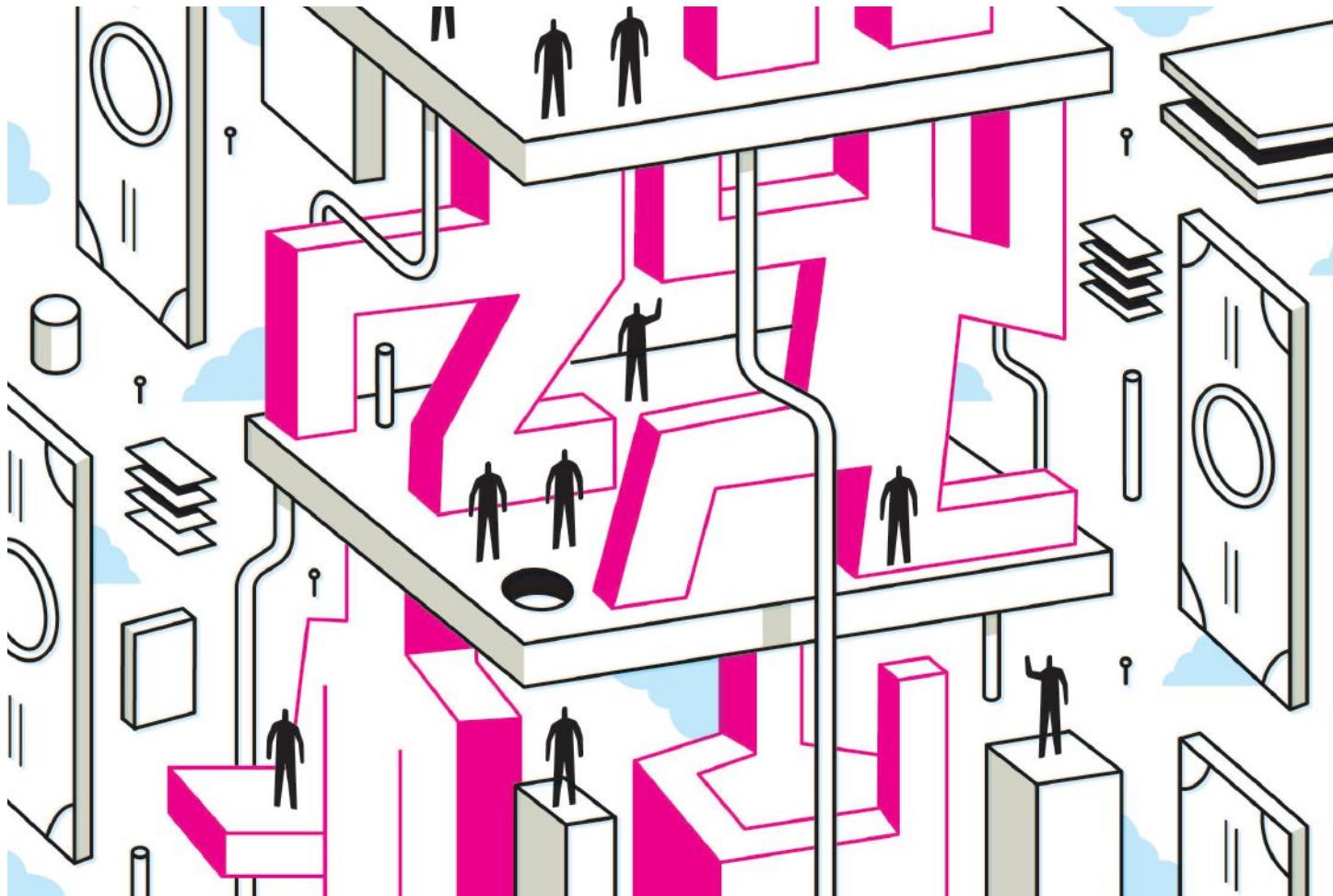


Trilux: This art installation, commissioned in 2011 by the Museum of Craft and Design in San Francisco, was displayed at Proxy, a temporary urban activation project in Hayes Valley that featured food vendors housed in transformed shipping containers. The project explored fabrication techniques and served as a gathering place for visitors, who could walk inside the latticed wood.

BUSINESS

THE PUBLIC OPTION

CROWDFUNDING HAS ARRIVED IN ARCHITECTURE—AND IT EXTENDS WELL BEYOND KICKSTARTER. ARCHITECTS ARE USING INNOVATIVE PLATFORMS AND LEGISLATION TO USHER IN A NEW ERA OF CREATIVE FINANCING.



Text by Elizabeth Evitts Dickinson
Illustration by Harry Campbell

THE VIDEO OPENS with a question: "Where do you build new green space in a crowded city like New York?" After the camera zooms down from a digital image of the Manhattan skyline to the congested street level, an answer appears on the screen: "Why not underground?"

Cue a sales pitch for the Lowline, a proposal by architect James Ramsey to turn the decommissioned Williamsburg Trolley Terminal into New York's first underground park. Ramsey, 35, the owner of Manhattan-based firm RAAD Studio, produced the video last year with several colleagues for a Kickstarter campaign. He had seen other architects bankroll personal ventures through online crowdfunding sites—a

growing phenomenon that *The New York Times* has called a new patronage model "for a DIY generation." Still, Ramsey was skeptical that he could raise enough money for his concept, a kind of subterranean version of the High Line. "What we were doing was much larger in scale than the other projects we saw getting funding," he says—namely, revitalizing 1.5 acres under Delancey Street on the Lower East Side.

Ramsey discovered the space in 2008. Since then, he has spent years tinkering with a remote skylight design capable of delivering light underground through the use of fiber optics powerful enough to support plant photosynthesis. He partnered with Dan Barasch, a community outreach expert, to form the Lowline nonprofit organization in 2011, and they turned to Kickstarter to raise funds for an

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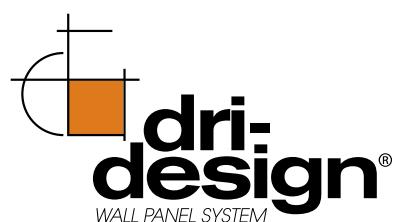
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CENTER

CROWDFUND 101

Kickstarter, Indiegogo, Fundrise, Fundable—more and more online crowdfunding platforms are emerging. But achieving a funding goal for a project is no easy task. Here are a few tips:

Pick the Right Platform: Kickstarter funds projects, not businesses, whereas Indiegogo funds anything, including startup capital for a business. Do your research to understand which crowdfunding platform best suits your needs.

Keep it Simple: James Ramsey and Dan Barasch didn't try to fund the actual Lowline with their Kickstarter campaign; that would have been too complex. Instead, they funded an exhibit that allowed them to develop a prototype of the technology and test the feasibility of their plan.

Make a Video: It doesn't have to be a Hollywood production, but it needs to be succinct. The Lowline video runs less than two minutes and emphasizes the critical components of the project.

Use Your Network: Word of mouth is critical. Consider the best strategies to reach constituents who may have a connection to your project. Go offline and host cocktail parties where investors can meet one another and ask questions.

Be Transparent: Fundrise attracts investors by building trust and making decisions public. "That's not how commercial real estate usually works," co-founder Benjamin Miller says. "Most people aren't privy to how the architecture happens or how the decisions are made. But we post every document online."

"Imagining the Lowline" exhibit that would help sell the idea and showcase a skylight prototype.

Founded in 2009, Kickstarter is one of the preeminent online platforms for raising money from individuals. In March, the company crested the half-billion dollar mark in funds pledged, with more than 3.4 million people giving money. Most campaigns on the site ask for less than \$10,000 to support a project, but Ramsey and Barasch took a big risk and asked for \$100,000. Their Kickstarter campaign went live on Feb. 22, 2012, and they hit their goal.

In eight days.

And people kept giving. By the close of the campaign in April, 300 backers had pledged \$155,186. "It was a startling result," Ramsey says.

RAMSEY IS FAR FROM ALONE. Crowdfunding websites—which allow individual donors to contribute to projects and businesses, often in return for simple perks (Ramsey offered benefits ranging from listing donor names on the Lowline website to inviting them to VIP cocktail parties, depending on the amount pledged)—now account for a significant revenue stream for architects and designers. Justin Kazmark, a Kickstarter spokesperson, estimates that more than \$70 million has been pledged for design-related projects.

Indiegogo, another popular crowdfunding site that launched in 2008, funnels millions of dollars in pledges every week to a variety of personal projects and businesses. The company says it has seen an uptick in campaigns from designers. After Superstorm Sandy hit last year, Indiegogo partnered with Architecture for Humanity, helping the nonprofit raise over \$1 million for its Restore the Shore campaign to rebuild Seaside Heights, N.J.

Crowdfunded design is by now a global phenomenon, allowing projects big and small to obtain financing through donations. In Bogota, Colombia, a developer solicited funds directly from the community to help underwrite the city's tallest skyscraper. In the Netherlands, the architecture firm ZUS partnered with the International Architecture Biennale Rotterdam to create a website to crowdfund a pedestrian bridge.

Just as important as the cash, though, is something else generated by these campaigns: community engagement. "The secret of crowdfunding is that it's not about the money," says Danae Ringelmann, co-founder of Indiegogo. "The true benefit of crowdfunding is being able to both validate an idea as well as engage a community. People are voting with their dollars. That's why it's so powerful for architects. It's an effective way for them to test ideas for a place and, if successful in crowdfunding it, prove that people want it to come to life."



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Kazmark agrees. "Backers have this longing for community, and one of the big things that the Kickstarter experience offers is for backers to be part of the process," he says. "As a backer, you get an up close look at the creative process. You get the feeling that you are a part of it. So it's more than funding; it's also about building a community around the idea."

Ramsey experienced this after the Lowline campaign went live online. "I would walk down the street and see people wearing Lowline T-shirts. I heard that someone created a video game set in the Lowline," he says. "Crowdfunding not only underscores and increases an appreciation for design, but it also directly involves people in the process. It's the ultimate for the democratization of society. I

can envision a future where an architect is able to design and build something with no client other than the community."

ARCHITECTS HAVE LONG been beholden to patrons—individual clients, developers, building owners—but with crowdfunding, waiting for a benevolent de Medici or Gerald Hines to underwrite a creative vision isn't necessary. Architects can cultivate their own revenue for projects that would otherwise fail to attract conventional funding. "Traditional avenues of funding are risk averse," Kazmark says. "Our focus has always been on independence and allowing creators to experiment without compromising on their vision."

Tobias Holler, AIA, principal of New York's Holler Architecture, teaches environmental design and technology at the New York Institute of Technology. Crowdfunding enabled Holler, 39, to design a recycling-sorting plant in Costa Rica, currently under construction, with his students. On Kickstarter last year, they reached over 43,000 people from 19 countries and raised over \$30,000. "That project would have just existed as drawings if it wasn't for the possibility of crowdfunding," Holler says.

In fact, with crowdfunding, as long as an architect can inspire people with a viable idea, it doesn't matter how off-the-wall it is. Ringelmann points to a project in England in which an architect and a nonprofit used Indiegogo to crowdfund the creation of a floating cinema on the canals and rivers of East London. "A bank or an investor might say: 'Who would ever do that?' But if there are people out there who think it's brilliant, then they should have the power to fund it," she says.

Moreover, designers can use crowdfunding to underwrite entire businesses. A Brooklyn furniture company called Aellon, specializing in contemporary and sustainable products, was unable to get a small business loan but was able to fund its launch in 2012 through Indiegogo. Now the company sells its designs in 12 stores in the U.S. and Japan.

The sudden popularity in community-funded architecture inspired the American Institute of Architects to launch its Crowdfunding Initiative last fall, with the goal of helping architects harness this new income potential. In January, the AIA published a research report titled "Crowdfunding Architecture," which examines the nuances of this fiscal model for the profession.

The report distinguishes between three main categories of crowdfunding. Donations-based funding supports a cause—such as rebuilding homes after a natural disaster—and the payout is the altruistic feeling of helping others. (In one of their campaigns, Architecture

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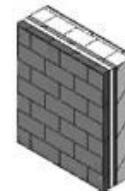
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CENTER

for Humanity told \$25 donors: "You will get pure, unadulterated karma.") With rewards-based funding, found on sites such as Kickstarter and Indiegogo, backers get something tangible for giving, usually some token related to the project, similar to what Ramsey offered for the Lowline project on Kickstarter. Then there's equity crowdfunding, in which investors get a fiscal return on the investment.

IN WASHINGTON, D.C., a company called Fundrise has helped pioneer this last, and most difficult, form of crowdfunding. Founders (and brothers) Benjamin Miller, 36, and Daniel Miller, 26, created a business model in which individual investors can contribute online to the development of local real estate projects. Last year, Fundrise drummed up \$325,000 from 175 investors for the revitalization of a two-story commercial building at 1351 H Street NE, in a gentrifying neighborhood near D.C.'s Capitol Hill. Investors will make money the way a landlord would—from rent, real estate appreciation, and any sale or refinancing. "You get a cash flow like a bond, and you get appreciation like a stock," Benjamin says.

The Miller brothers, native to D.C., hope that Fundrise will help close the chasm that exists between property development and residential need. People rarely get a legitimate say in the types of businesses or the style of architecture in their neighborhoods. "To have a voice, you have to go to some rec room at 7 p.m. and wait in line and hope somebody pays attention to you," Benjamin says. "But in most cases, you have a review board composed of people who do not live in your neighborhood who drive the architecture. And at the end of this long, laborious process, you end up with architectural gruel. Nobody likes the process. Nobody. But we have it. It's like legacy. It's the old way of doing things."

The big banks, meanwhile, often aren't aware of local development trends. "We were buying this great property on H Street in a young, vibrant, bohemian neighborhood, with plans of redeveloping it into apartments and businesses," Benjamin says. "I would tell friends and people in the community about it, and they would love the idea. And then I would go to private equity funds, the source of real estate funding, and they'd say: 'What? I've never heard of this neighborhood.' It was such a bizarre thing."

By allowing individuals financial access to real estate development, and by inviting them to contribute ideas to the redesign, Fundrise hopes to not only raise money but also to demystify the development process in order to support the creation of strong, well-designed communities. For decades, architects have debated ways to increase the public's awareness of, and interest in, good design,

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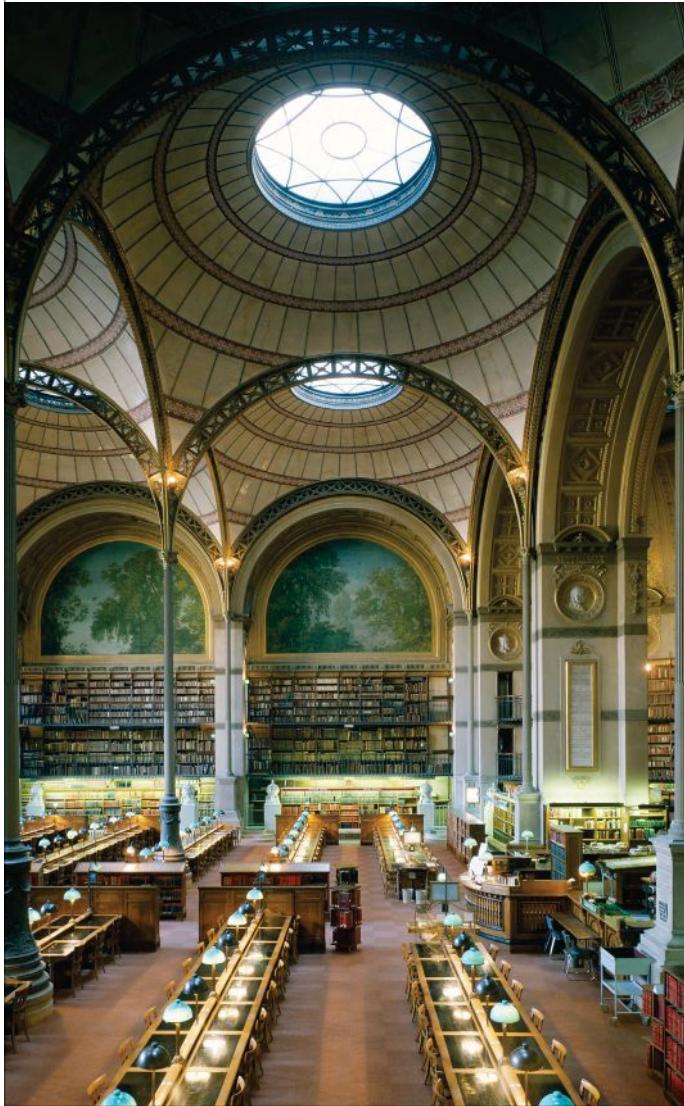
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Henri Labrouste, Bibliothèque nationale, Paris, 1854-75.
View of the reading room.
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and crowdfunding—with its participatory process—may offer that opportunity.

Matt Campolongo, 30, a graphic designer living on H Street, invested \$1,000 in the 1351 project—a decision that has made him more active in his community. “We’re seeing a lot of change in our neighborhood, and oftentimes you feel like you don’t have a say in those big changes,” Campolongo says. “For a small contribution, you can invest in an actual stake in a building and a business. And because I’m invested now with my money, that is another incentive to educate myself on what goes into making a property happen.”

Structuring a crowd-equity platform that allows individuals like Campolongo to invest was no easy task for the Miller brothers. The Securities Act of 1933 makes it nearly impossible for nonaccredited investors to contribute to a property in this way, let alone online. Fundrise hired a bevy of lawyers to help them figure it out. “I had no precedent,” Benjamin says.

Ultimately, Fundrise employed a little known SEC regulation for 1351 H Street: Regulation A, which offers an exemption on normal rules for public offerings not exceeding \$5 million in any 12-month period. Benjamin believes the only other entity to use this was a Broadway play, “Godspell.” Fundrise has been working to make these types of offerings possible for other buildings and developers.

Today, the SEC is on the verge of making it easier for anyone to employ equity-based crowdfunding for real estate. The Jumpstart Our Business Startups Act, or JOBS Act, signed into law by President Obama a year ago, allows people making less than \$200,000 a year and with a net worth of less than \$1 million, to invest in buildings. Prior to the law’s passage, only accredited investors were permitted. Property investors can’t yet take advantage of the new law, however, because the SEC is still developing investor-safeguard rules. The AIA, as a part of its CrowdFund Initiative, has been encouraging the SEC to release those rules and open this stream of new funding.

BACK IN NEW YORK, James Ramsey is still hard at work on the Lowline. The exhibit funded by Kickstarter took place in an abandoned warehouse on Essex Street in September. Ramsey has now partnered with industrial designer Ed Jacobs and the global engineering firm Arup to continue refining the design for the underground park. He’s also exploring how to acquire the property, which is currently owned by New York City. After sitting down for an interview for this story, Ramsey had to run to another appointment: a meeting with city officials to discuss the possibility of making the Lowline a reality.



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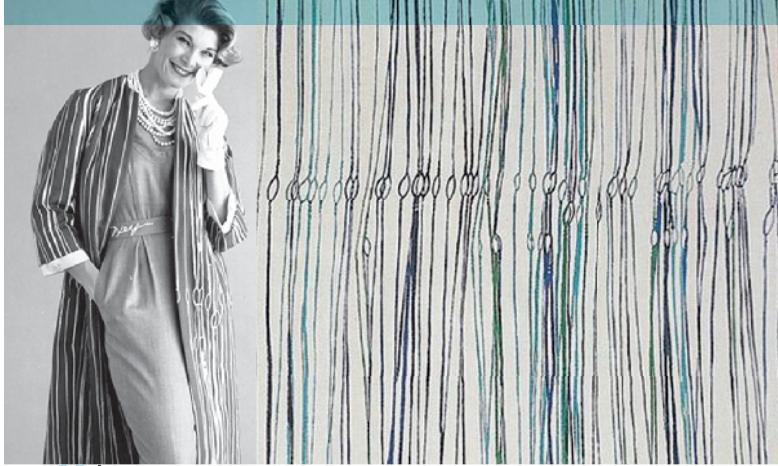
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CTA MORGAN STREET STATION





A NEW GLASS-AND-STEEL TRANSIT STATION BY ROSS BARNEY ARCHITECTS RETURNS THE 'L' TO A CHICAGO NEIGHBORHOOD TRANSITIONING FROM SKID ROW TO LOFTS AND THE GOOD LIFE.

Text by Katie Gerfen
Photos by Kate Joyce

LAST MAY, for the first time in more than 60 years, a train stopped at Morgan and Lake streets at the western edge of the Chicago Loop. Since 1893, the intersection had been home to a stop on the commuter rail line leading from the central business district to the western suburb of Oak Park. But a changing neighborhood and reduced demand meant that the station was declared obsolete in 1948, and instead of stopping, the trains began passing through.

The neighborhood has undergone massive changes over the years—morphing from the center of the city's fresh food industry at Fulton Market, to a desolate stretch bordering Chicago's Skid Row. But recently, changing demographics, loft conversions, and an influx of boutiques and new residents have caused the Chicago Department of Transportation (CDOT), which owns the station, and the Chicago Transit Authority (CTA), who operates it, to rethink the status of the long-defunct stop.

CDOT commissioned local firm Ross Barney Architects, which has designed several other stations in the system, to breathe new life into Morgan Street. "What you're really trying to do is identify transportation as you come upon it. You're not trying to hide it," says principal Carol Ross Barney, FAIA. "The CTA was interested in a station that looked the way they want people to perceive CTA service: efficient and quick."

The staggered inbound and outbound platforms are flanked by two glass and stainless steel enclosed towers—an airy contrast to the heavy metal infrastructure supporting the elevated tracks. The aging track structure had to be fortified before it could withstand the weight of the new station, and new precast concrete platforms were put into place.

The towers themselves are connected by a pedestrian bridge that spans above the trains. But the bridge isn't just for looks. The CTA operates its stations under a system of free and fare zones; once a person passes through one of the turnstiles at street level, it becomes impossible to exit and re-enter without incurring another charge. The bridge allows riders the freedom to

enter the fare zone on either side of the station and make their way to either platform.

Other design decisions were similarly driven by a careful balance of aesthetics and pragmatics. The glass-enclosed stair towers are covered on three sides by perforated stainless steel panels that add dimension during daylight hours, but also offer protection against CDOT's number one enemy: graffiti. "It used to be that the major threat for graffiti was spray paint," Ross Barney says, noting that former Mayor Richard M. Daley banned the sale of spray paint in the city in 1992.

"The really artistic taggers still go buy paint," Ross Barney says, "but the guys who just want to tag for immortality started using diamond dust and hand engravers. So then the glass was vulnerable." The stainless steel panels covering the glass prevent the etching from taking place, but the combination also lends the towers a "nice ethereal feeling," Ross Barney says.

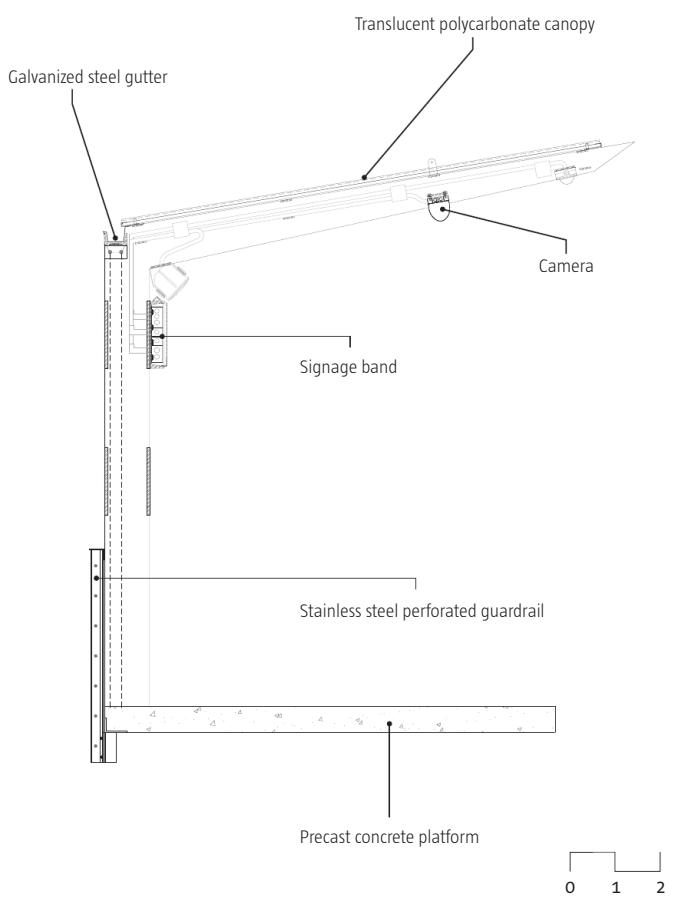
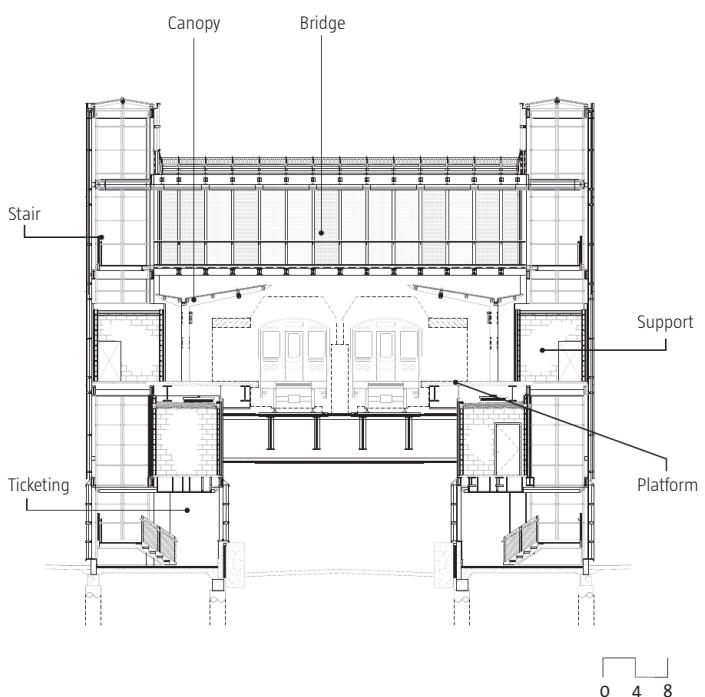
The architects also used the perforated stainless steel panels along the station platforms as guardrails and wind breaks lining the backs of canopies that shelter commuters from rain and snow. The canopies are topped with sheets of turquoise-toned polycarbonate that Ross Barney says, are far cheaper and easier to maintain than glass panels.

The majority of the canopies along the platform feature these polycarbonate shades, but at the far reaches of the station only the painted-steel framework is present. That is because, even though the CTA currently only runs four- or six-car trains on the line, they wanted the station to be designed to accommodate eight-car trains as ridership grows. "This way, they can add a canopy as they need it," Ross Barney explains.

As the neighborhood continues its resurgence, that kind of flexibility is key, but so was creating a design that is "of its time," Ross Barney says—as opposed to slipping the station invisibly into the urban fabric. "If I had to classify the building, I'd say that it's very simple, but it's very hopeful," Ross Barney adds. "I think that what we did is an accurate reflection of how people feel about cities: They are being renewed."



Previous spread: The new CTA station at Morgan and Lake features two stair towers flanking the elevated rail line. **This image:** The stair towers' glass enclosure is covered in perforated stainless steel panels to prevent graffiti. Only the elevator cores were left simply glazed. "Those are all exposed," Ross Barney explains, "because if people can be seen, then they feel safer."

Canopy Section**Section**



The station's two elevated platforms are connected by a pedestrian bridge. Polycarbonate-and-painted-steel canopies provide shelter from the elements for those waiting for their trains.



O.C.T. SHENZHEN CLUBHOUSE

RICHARD MEIER'S FIRST PROJECT IN CHINA, A PRIVATE CLUB FOR THE ELITE OF SHENZHEN, USES NEW FORMS AND MATERIALS THAT SHOW HOW EVEN AFTER 50 YEARS, THE FAMED ARCHITECT ISN'T RESTING ON HIS LAURELS.



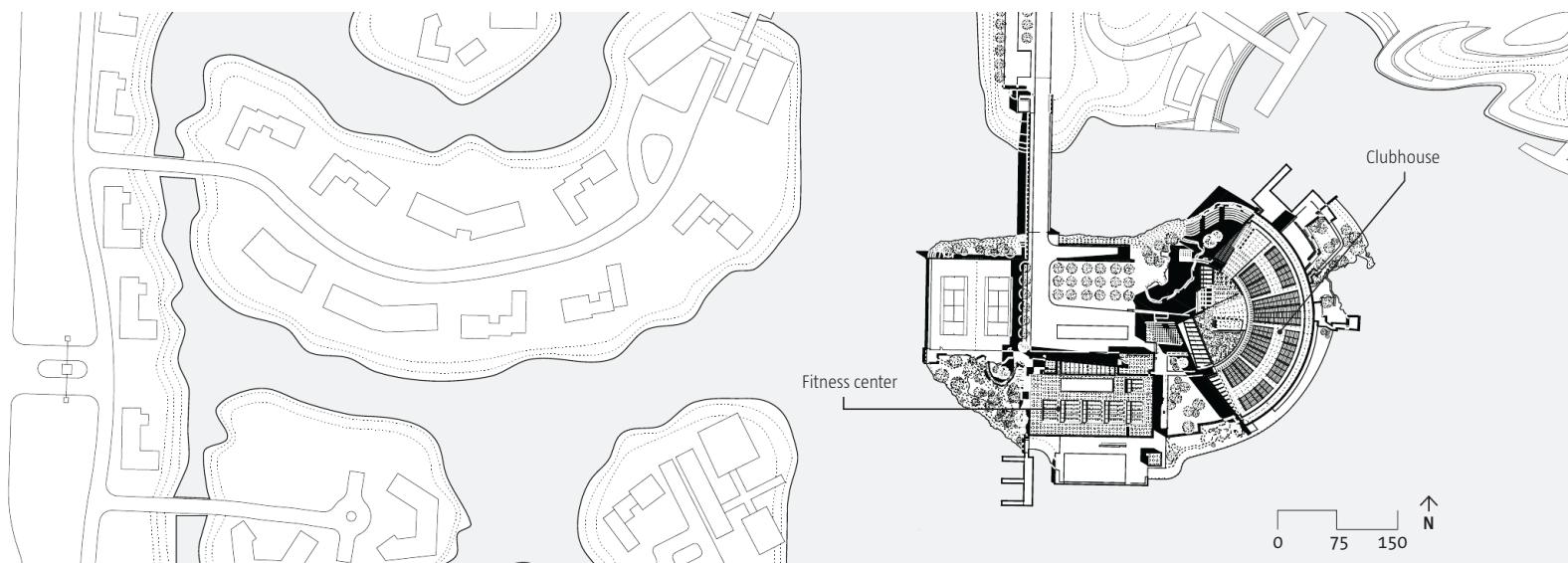
Previous spread:

The approach to Richard Meier's new OCT Shenzhen Clubhouse is characterized by the opaque façades of both the main clubhouse (at left) and adjacent fitness center (at right).

This image: Once visitors pass through the entry to the exclusive complex, the building opens up to views of the surrounding bay.



Site Plan





Text by **John Gendall**
Photos by **Roland Halbe**

FIFTY YEARS AFTER launching his practice in New York, and nearly 30 years after winning the Pritzker Prize, Richard Meier, FAIA, still hasn't run out of career 'firsts'. With his newly opened OCT Shenzhen Clubhouse, a private fitness and social club for the city's elite, the 78-year-old architect continues to add to that already long list, most notably with 'first completed project in China'.

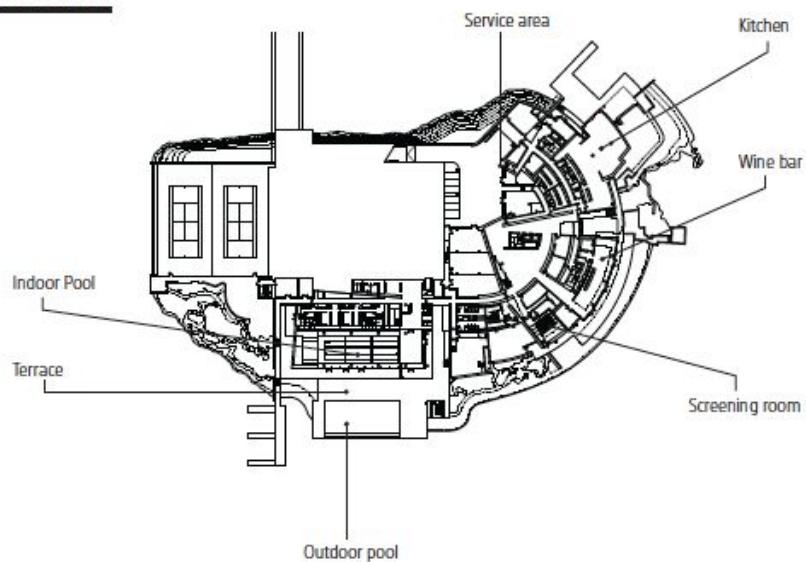
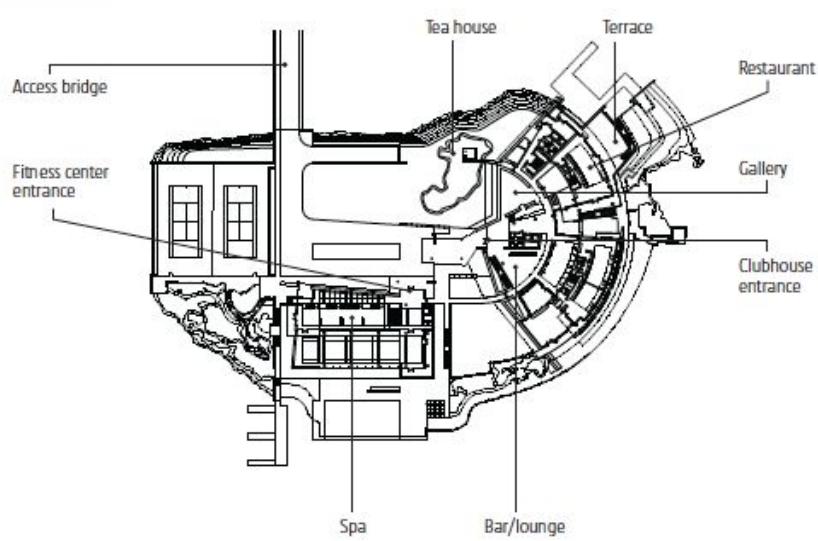
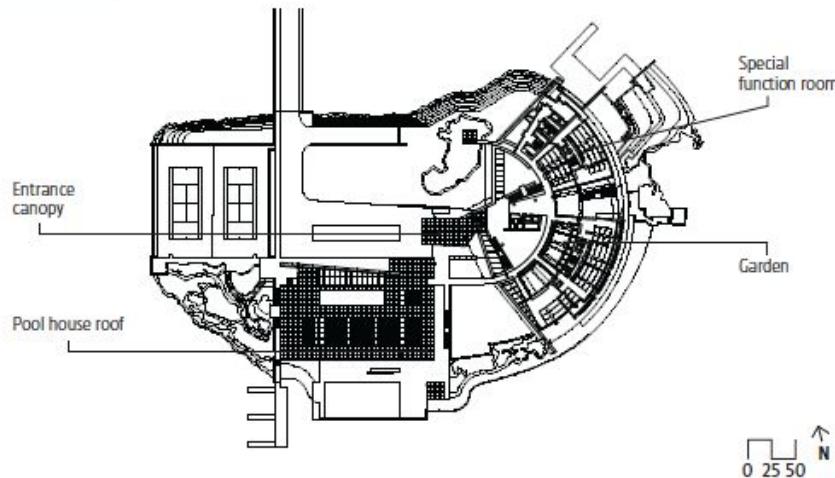
The complex consists of two buildings occupying an artificial island on the southern edge of Shenzhen, a waterfront financial center immediately north of Hong Kong. The main clubhouse incorporates lounges, reception rooms, and a gallery; it and an adjacent, free-standing fitness center sit in a bay ringed by a busy cultural and entertainment district.

Knowing the clubhouse was meant to be a quiet oasis, Meier was intent on framing just the right kind of views out to the surrounding water. In walking through the space, sightlines open onto the bay and to certain urban landmarks. As a way to amplify this effect, and to acknowledge the private nature of the club, the building, as seen on initial approach, is entirely opaque, save for a punched opening around the porte cochere.

Anyone familiar with Meier's earlier work will find the treatment of the entry sequence surprising, not so much for its opacity, but for its irregular prismatic shape. At first blush, it seems as though the man who has done so much to cultivate modernist orthodoxy might have finally sinned against his own tenets. Over the course of his career, Meier has developed his own architectural language, hewing to a strictly defined three-dimensional grid with resulting lines and planes intersecting at 90-degree angles. "The clubhouse is very sculptural," he confesses, acknowledging the seeming break with his own tradition.

If the design seems aberrant, though, it's only so on first glance. Redemption is to be found in the geometry. "This was a challenge, since these walls are tilted and in a radial pattern," explains senior associate Vivian Lee, AIA. Working with project architect Jerome Engelking, the design team was able to three-dimensionally model the phantom structural grid and reconcile the diagonal lines of the clubhouse entry with those of a more orthogonal building. "We could not have done this project without the



Lower-Level Plan**Ground-Floor Plan****Second-Floor Plan**

computer," Meier concedes. "Not just in terms of drafting, but also working geometries out in the computer." Whereas earlier projects (borne of pencils, T-squares, and compasses) held more closely to 90-degree grids, this one reconciles oblique angles in perspective.

The commission (and its deep-pocketed client, the OCT Urban Entertainment Investment Co. of Shenzhen) allowed him to experiment with materials, prompting another first. "We've done porcelain panels, aluminum panels—just about every kind of panel you can think of," Meier says, referring to the tiled surfaces that have become a trademark of his work. "But this was the first time we worked with a high-quality Corian panel." The irregular geometries of the Shenzhen clubhouse posed a problem in creating a regular pattern out of the panels, but the design team adjusted their phantom structural grid with a projective geometry in such a way that the panels, which are in fact, trapezoidal, appear orthogonal to the human eye.

One of the big perks of working with Corian is that individual pieces can be sanded together to form very large seamless units. For Meier, though, the seam is a critical element of his design, since it establishes geometries and parses surfaces into constitutive units. The paneled surface—a signature of his work since 1983, when he completed the High Museum of Art in Atlanta—has become synonymous with his work. "The panels give the space a human scale," he says.

So, with this new material, the firm needed to first introduce a system of seams that would panelize the Corian. The first seam system is an effectively invisible network of 2-millimeter expansion joints, and the next is a 2-centimeter joint used to express the geometry and to break the large mural surfaces down to a human scale.

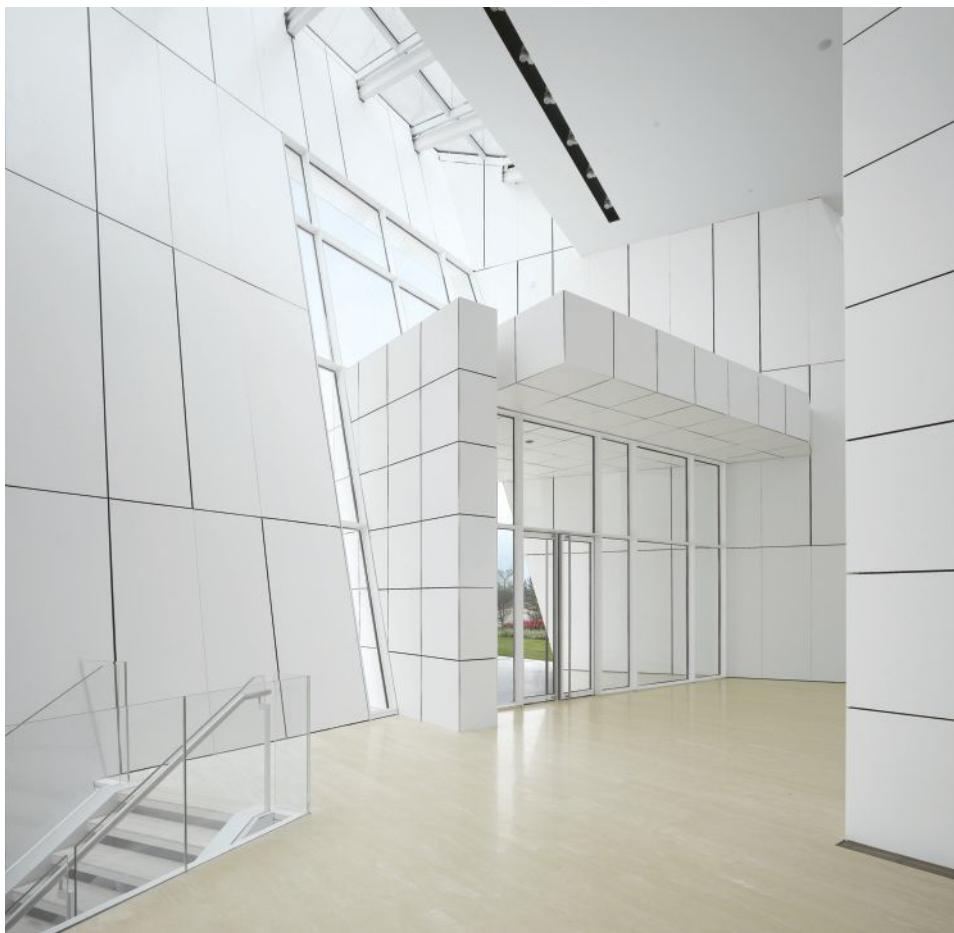
When asked about his impressions of working with Corian, Meier emits an approving gasp, then points to the clubhouse interior and says, "Look at that corner!"—leaving the material's crisp finish to speak for itself. Each panel is custom designed and fit. "The quality of workmanship was really great," he says. "You can see it in the joints."

Reflecting on his 50-year practice, Meier acknowledges that the threads he has woven throughout his career make themselves known in the design of the clubhouse, just as in the rest of his portfolio. "Quality of light is so important," he says. "So much of our work has been on the water, and whether it's in Shenzhen or on Perry Street in New York, you get this reflection and refraction of light off the water, which I love."

It is this combination of pulling from the past and still breaking ground that makes the OCT Shenzhen Clubhouse an interesting step in a storied career—which undoubtedly has several firsts remaining.

The entrance of the main clubhouse breaks with Meier's typically orthogonal approach to design. But the prismatic volume is clad with trapezoidal Corian panels that re-establish the perpendicular geometries of a 90-degree grid.





Top: The Corian panels continue on the wall surfaces inside the clubhouse, including on the canted walls of the main lobby.

Bottom: Natural light floods circulation paths through the clubhouse, which are dotted with seating areas and reflecting pools that echo the building's aquatic surroundings.

Opposite: The fitness center's indoor pool is lined with a cherry wood screen wall and windows that open into a solarium (at rear) and spa (at left). A skylight shaded by fixed aluminum screens brings light into the double-height space, as does a glazed wall that looks out at the outdoor pool.





CRIT

BEGINNING TO SEE THE LIGHT

HENRI LABROUSTE FINALLY GETS A FAIR HEARING IN "STRUCTURE BROUGHT TO LIGHT," AN EXHIBITION AT THE MUSEUM OF MODERN ART DEVOID OF POSTMODERN BAGGAGE.

Text by Thomas de Monchaux

IF YOU'RE WANDERING AROUND the third floor of the Museum of Modern Art (MoMA) sometime between now and June 24, you may see something surprising: an arch. Don't be alarmed! It's not some misguided corrective to MoMA's colossally banal 2004 renovation, nor a time-travel portal taking you to "La Strada Novissima" at the 1980 Venice Architecture Biennale. The mischievous semicircle is instead a flourish of stagecraft in drywall announcing "Henri Labrouste: Structure Brought to Light." The exhibit surveys the French proto-modernist architect whose lifetime (1801–1875) saw extraordinary social, political, and technological revolutions, and was bracketed—seemingly impossibly—between the monumentally Neoclassical era of Antoine Vaudoyer (who taught Labrouste at the École des Beaux-Arts) and the modern age of Louis Sullivan (who spent 1874–1875 studying at the École in Paris).

"We've been here before," said Barry Bergdoll, the museum's chief curator of architecture and design, at a recent preview, confessing some trepidation at bringing Labrouste back to Midtown. Labrouste's last visit was in 1975, courtesy of MoMA's then-curator Arthur Drexler, whose "Architecture of the École des Beaux-Arts" exhibition, as today's wall text puts it, "sent shock waves through the world of modernist architecture. It seemed that the museum that had advocated a rejection of history and of ornament in favor of the International Style since [...]

1932 had now embraced the academy that was the veritable nemesis of so many architects of the modern movement." With tacit and explicit references to architects of the then-nascent postmodern movement, Drexler's show highlighted the charismatic classicism of Labrouste's erudite façades.

But it's an earlier revival of Labrouste that the present exhibition cites, going deeper into the past to make a case for his future relevance. In the same display case that houses Drexler's catalog, Bergdoll places books by modernist historian Sigfried Gideon (known best for his 1941 classic, *Space, Time, and Architecture*), which make the case for Labrouste as a modern pioneer. Gideon's 1928 *Bauen in Frankreich, Bauen in Eisen, Bauen in Eisenbeton* juxtaposes a photograph of a tubular, steel column from Le Corbusier's Villa Savoye with an identically unadorned structural iron cylinder in the rare book reading room of Labrouste's Bibliothèque Sainte-Geneviève from a century earlier.

It was the Bibliothèque Sainte-Geneviève (1838–1850), along with the development of similar ideas in an extension and renovation to the nearby Bibliothèque Nationale de France (1859–1875), that are Labrouste's defining projects. Both buildings feature central reading rooms structured by slender iron columns—at Sainte-Geneviève, two parallel vaulted bays; at the Nationale, a nine-square array of shallow ceramic-vaulted domes supported by a grove

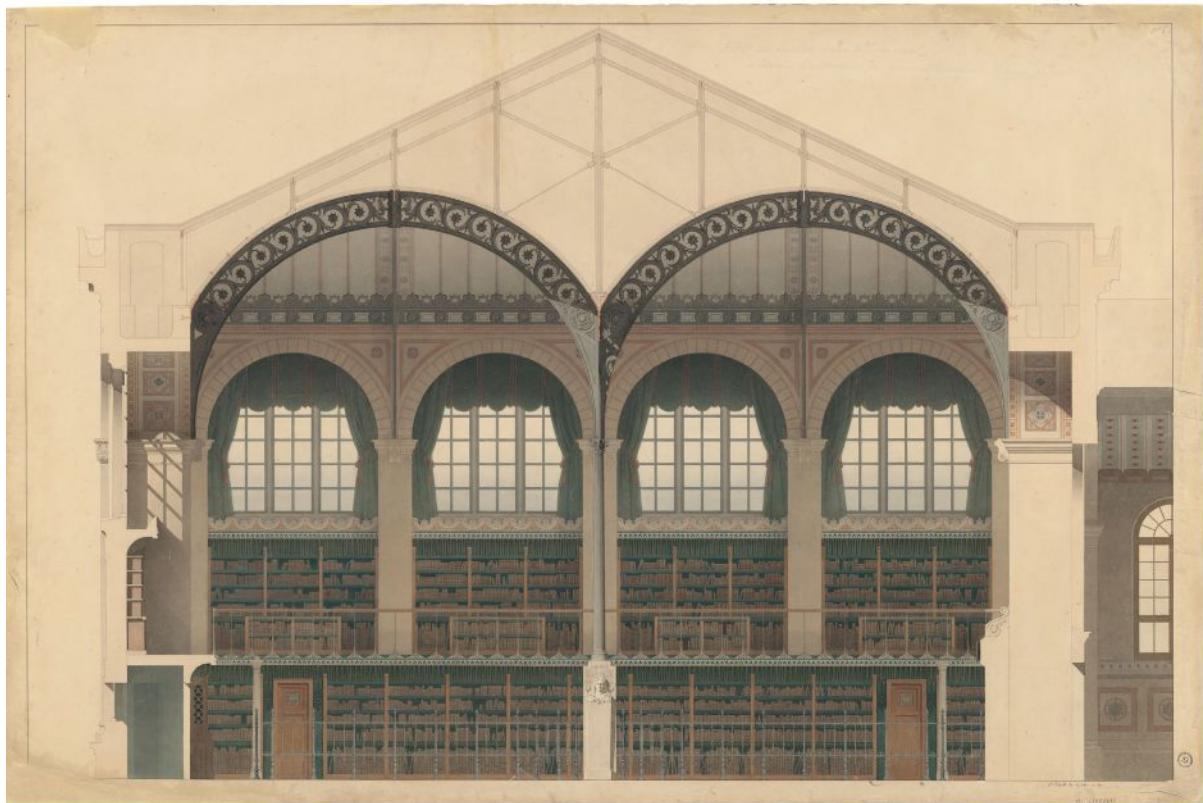
The reading room at the Bibliothèque Nationale de France (1854–1875) by Henri Labrouste.





Above: The reading room at Labrouste's Bibliothèque Sainte-Geneviève, 1838–1850.

Opposite: Labrouste, *Bibliothèque Sainte-Geneviève, coupe transversale sur la salle de lecture*, 1850.



of 33-foot-tall skinny iron columns. Sainte-Geneviève is wrapped by a traditional masonry perimeter wall, whose arched exterior features supergraphic inscriptions (beloved by those who would claim him for Team Venturi) of 810 of the august writers and philosophers whose works could be found within—features that were adopted by Charles McKim for his 1888 design for the Boston Public Library, and by many lesser imitators.

Both of Labrouste's libraries embodied something of the dramatic social and technological developments of their day. Sainte-Geneviève was a major public building illuminated by gas lighting, and the first civic library of its kind that remained open to the reading public after dark. Labrouste's intricate layouts for that building's basement heating tubes, in their laconic ductile geometries and graphic play of radiused angles, have a perennially futurist look that resembles the visionary post-1960s work of Archigram's celebrated pop-tech draftsman, Michael Webb. (The show displays these layouts, part of a gratifyingly complete presentation set of the entire building, in elegantly angled cases that evoke the drawing boards on which they must have been originally produced.)

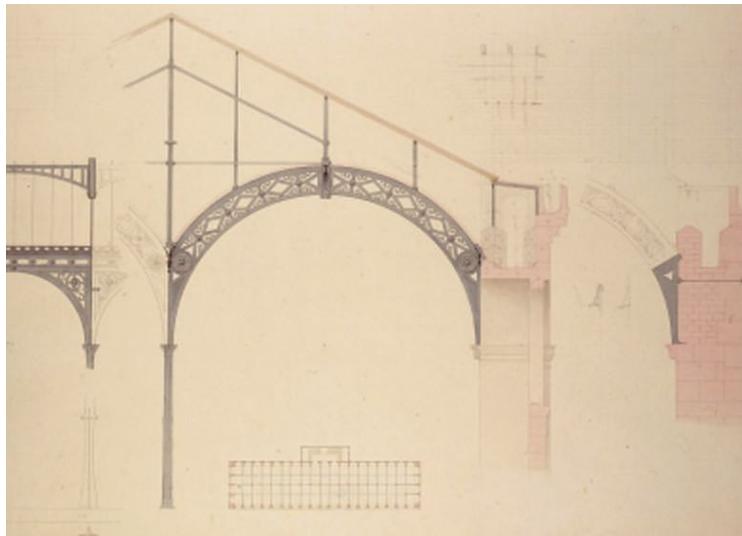
France's Bibliothèque Nationale, analogous to the United States's Library of Congress in its mission to accumulate every published document in the nation, presented complex time and space problems of information storage and

retrieval. This was solved, in part, by a system of pneumatic tubes that assisted in the delivery of books from stacks to the reading room, a system visible through the large glass wall between the two spaces.

In a handsome cutaway reconstruction model that is one of the exhibit's centerpieces, those stacks appear startlingly contemporary: six dense stories of shelves poised on a seemingly lightweight metal superstructure, accessed by meshlike metal grille walkways, skylit from above by vast glass panels like a great 19th-century train station. As revealed in the model's cutaway, those stacks could easily be taken for a contemporary addition by the likes of, say, SANAA or SHoP Architects.

And yet this isn't—entirely—a story of decorated stage and functional backstage: Labrouste left the proto-Miesian metal-and-glass box of those stacks clearly visible through a giant arch (framed by caryatids, no less) opening into the reading room, which also featured thin iron columns, albeit with vaguely Corinthian capitals. If successive generations of historians sought to align Labrouste to either modern or postmodern, to the avant-garde or historicist, Labrouste's juxtapositions present a complexity in which there is, at least for him, no contradiction: steel cylinder and stone caryatid, together in startling immediacy.

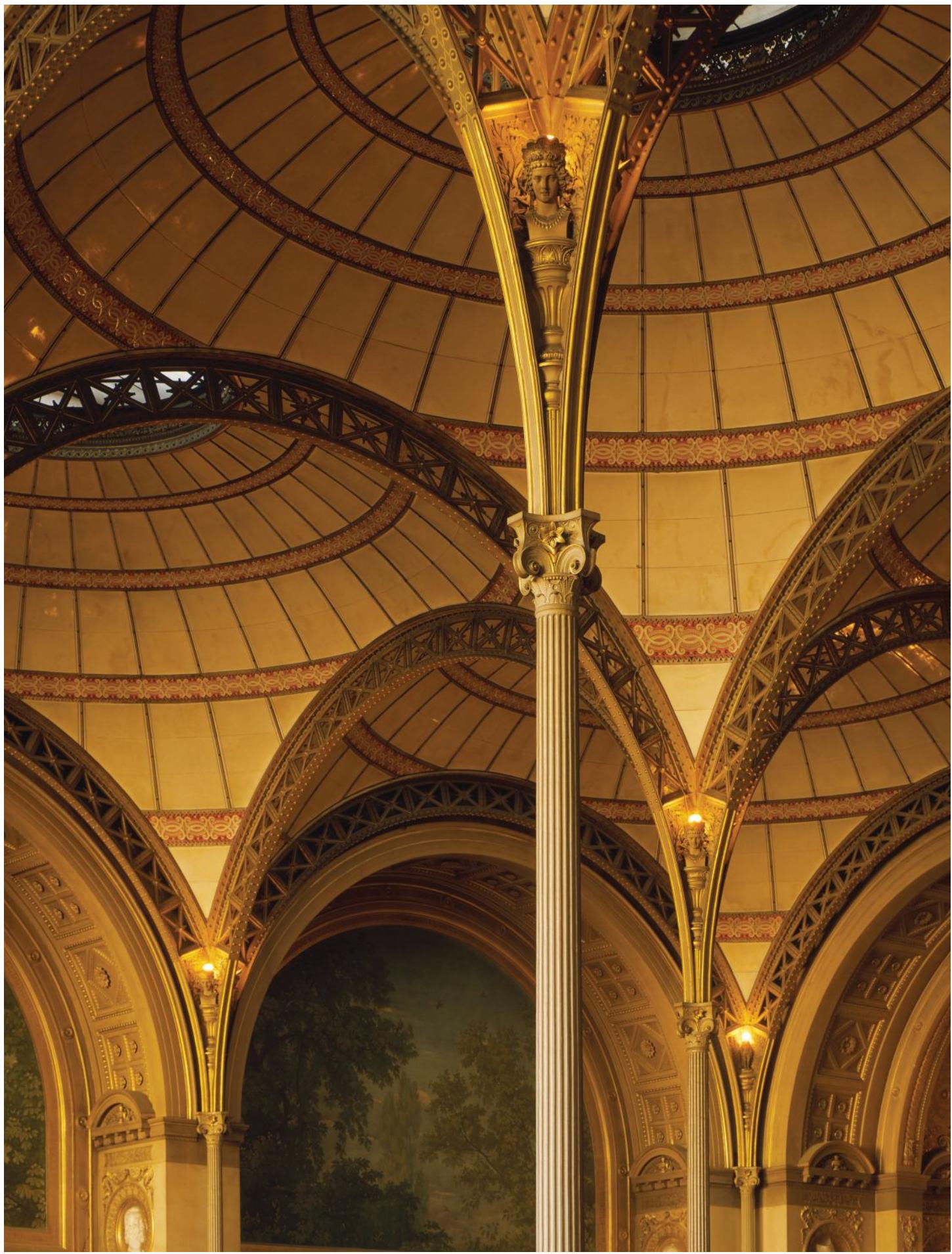
For Gideon and his contemporaries, these juxtapositions were an expression of Labrouste's



Top: Labrouste, *Bibliotheque Sainte-Geneviève, étude pour les fermes en fonte du premier étage et le comble en fer*, 1846. **Above:** Labrouste, *Bibliotheque Sainte-Geneviève*, 1850. **Opposite:** The columns and cupolas of the Bibliotheque Nationale.

heroism, his romantic and prophetic status as a designer ahead of his time. But the current exhibition tells a richer and more subtle story, situating Labrouste among a constellation of contemporaries at work on similar encounters between historical formalisms and emergent technologies. While Labrouste established a radical adjacency between classically formalist masonry and proto-modernist metal and glass, his contemporary Eugène Emmanuel Viollet-le-Duc (1814–1879) attempted an awkwardly sincere structural and formal integration of iron and stone in a kind of idiosyncratic Neo-Gothic—most famously in his much-published 1864 project for a vaulted assembly hall with iron vaults and masonry infill. Peers and pupils of both men, such as Anatole de Baudot (1834–1915), with his church of Saint-Jean-de-Montmartre in Paris, developed their research toward innovative applications of steel and reinforced concrete, and attempts at a formal rationalism expressive of those innovations. One could draw a credible line through this work into the designs and desires of Auguste Perret (1874–1954), and the subsequent work of Perret's star employee, Le Corbusier.

But if this elegant, erudite show situates Labrouste into a great sweep of French and European architectural history, whose remarkable social and political reversals (from republic to kingdom to empire and back) were reflected in his polyvalent work (especially in unbuilt projects for emerging social institutions such as prisons and clinics), it also establishes a more intimate view. A long corridor back to that library model is lined by the laborious, analytical drawings and preparatory sketches that Labrouste produced in Rome in the 1820s. And, in the shadow of that entrance arch, a case featuring all the well-worn tools—triangles, leadholders, erasers, quills, plumb bobs, sketchbooks—used to make them. The tools look alive and, especially in today's industrial-artisanal age, completely modern, and, like the silk Prix de Rome laurel wreath next to them, like all the work nearby, are ever new, ever strange, ever green.



QUEEN ALIA INTERNATIONAL AIRPORT





FOR ITS NEW AIRPORT IN AMMAN, JORDAN, LONDON-BASED FOSTER + PARTNERS CREATED A SINUOUS EXPANSE OF THIN CONCRETE DOMES THAT TURNS A WORKHORSE TYPOLOGY INTO A CELEBRATION OF AIR TRAVEL.



Text by Ian Volner

Photos by Nigel Young/Foster + Partners

WITH MIDDLE EASTERN AIRLINES taking on a growing volume of global traffic, the region's airports are quickly expanding to become major hubs for international travelers. Case in point: Amman, Jordan's Queen Alia International Airport played host to a scant two-and-a-quarter million passengers per annum a decade ago; today it takes on nearly three times that number, and with a new terminal just completed by London-based architects Foster + Partners, its capacity has swollen to a full 9 million.

The 100,000-square-meter (1.08 million-square-foot) facility makes room for as many as 15 additional airside departure gates and remote stands, meaning weary flyers now spend less time taxiing to the gate. Once inside, passengers find themselves in an airy, light-filled environment, sheltered beneath a roof system of precast and poured concrete, shaped into a sequence of billowing baldachins. The effect of the more than 80 conjoined domes seems a gesture to the desert tents of the region's past, and a light, decorative pattern traced on portions of the ceiling surface evokes the complex geometries

of historical Islamic art. Yet the Foster team designed the roof with the future in mind—the insulating quality of the concrete helps to keep the building cool in the day and warm in the evening, reducing energy consumption while keeping Amman's extreme climate in check.

Also indicative of Jordan's future: the price tag. The current phase of terminal construction rings in at \$850 million—including \$110 million for rehabbing existing facilities—and there's more to come, with another stage of the expansion slated for completion by 2020. That phase will add another 16,000 square meters (172,223 square feet) and another 15 aircraft berths to the airport. It will allow for passenger capacity to rise from 9 million per year in the current facility to 12.8 million per year, making Amman a major commercial *entrepôt* to the region. Even with the additional facilities, it will still face stiff competition: Dubai International Airport is already home to the world's largest terminal, and the city-state in the United Arab Emirates recently unveiled plans to increase capacity to a stunning 90 million passengers by 2018.



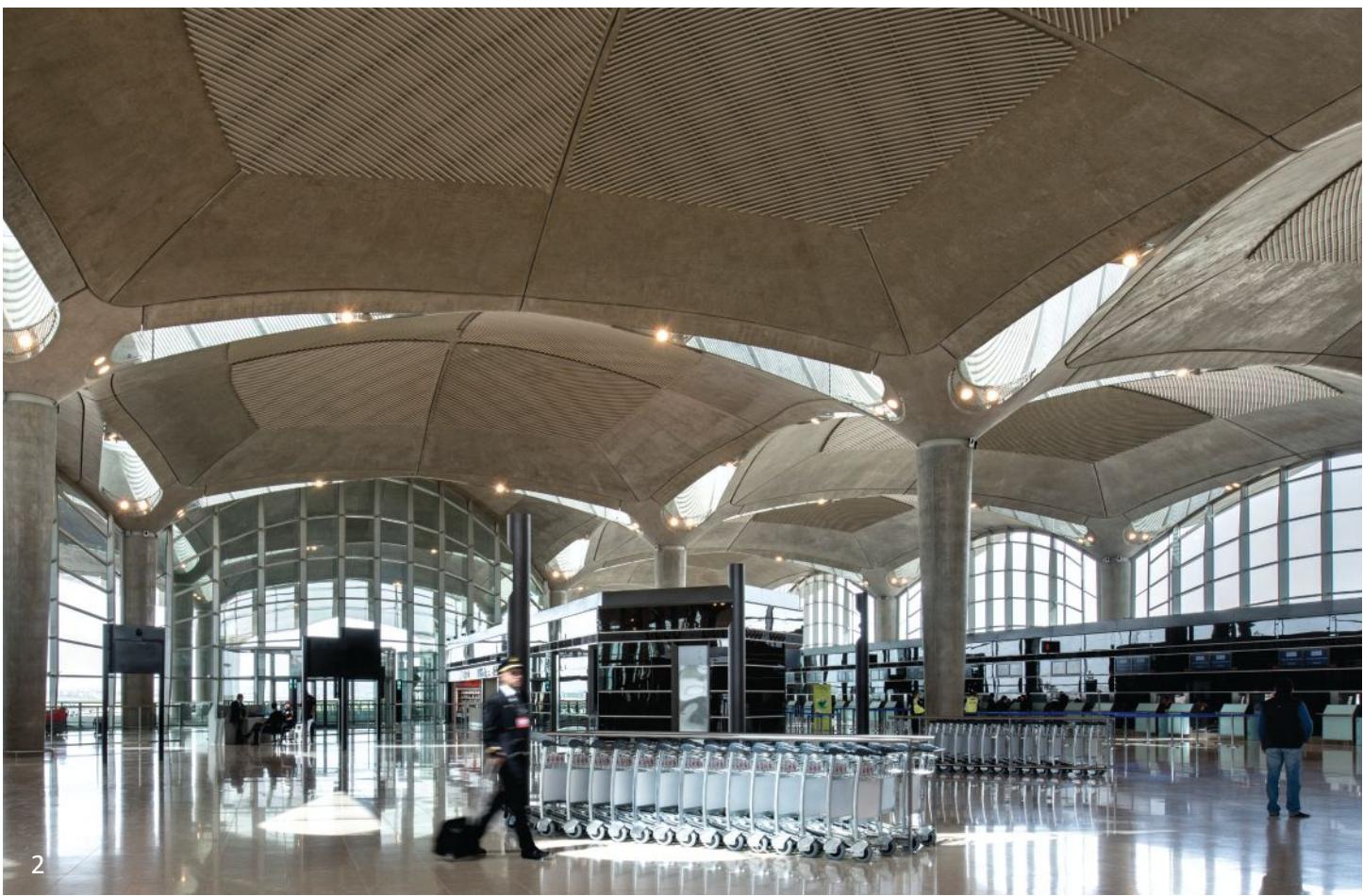
Previous spread: Along the perimeter of the new Queen Alia International Airport building, precast concrete shade structures catch the light. The team chose concrete because "in summer there is a marked difference in climate between day and night in Amman, so the solid structure helps to regulate the interior temperature naturally," says Foster + Partners partner Jonathan Parr.

Above: An elevated roadway fronts the airport's three-story, 85-foot-high facade, with passenger pick up on the lower level and drop off on the upper. The vaulted ceiling of the departures hall is clearly visible through the glazing that encloses the structure.

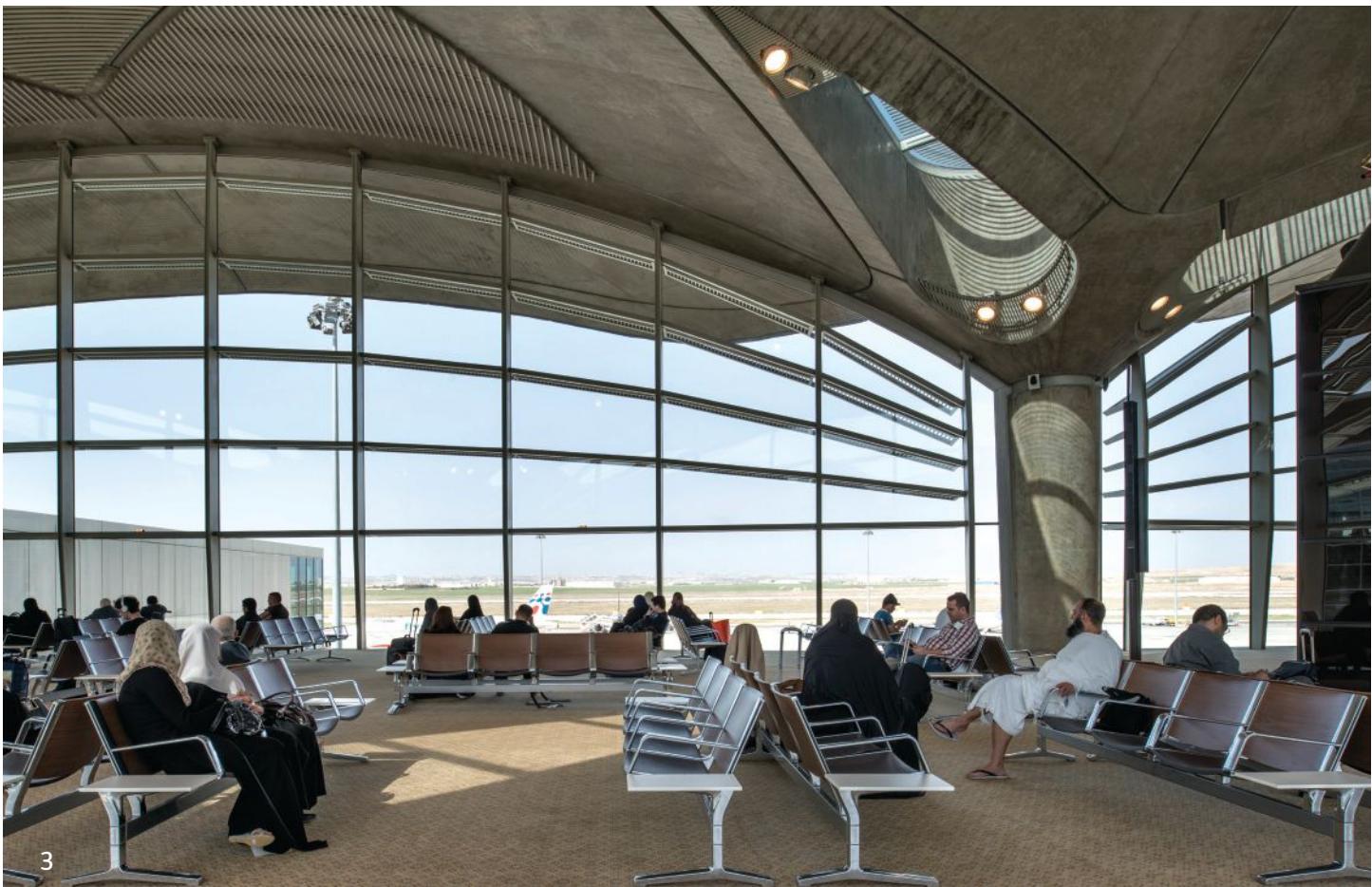
Left: The cranked 45-degree grid, comprising more than 80 precast concrete vaults, forms the roof plane and becomes plainly evident when seen from above, as pictured. "Our original modular concept meant that the building could be easily reconfigured, and can be again in the future, if required," Parr says. An additional 172,000 square feet is planned for completion by 2020.



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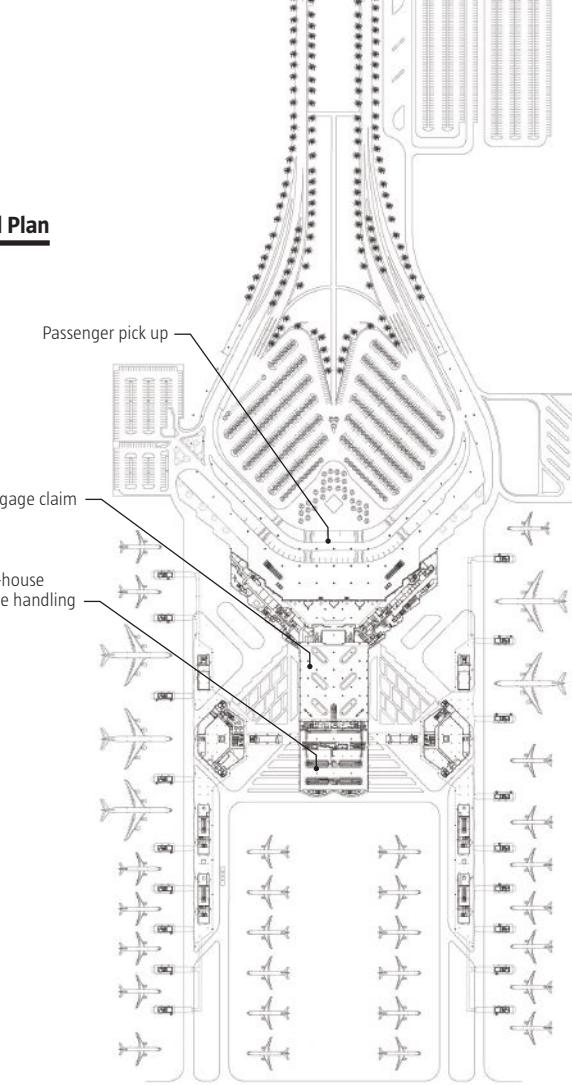
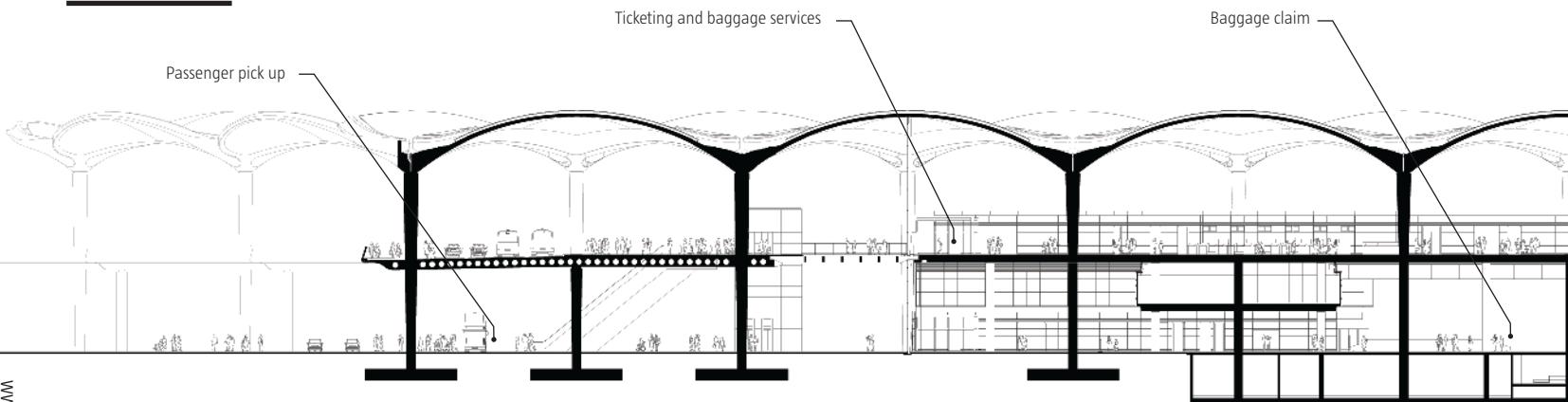


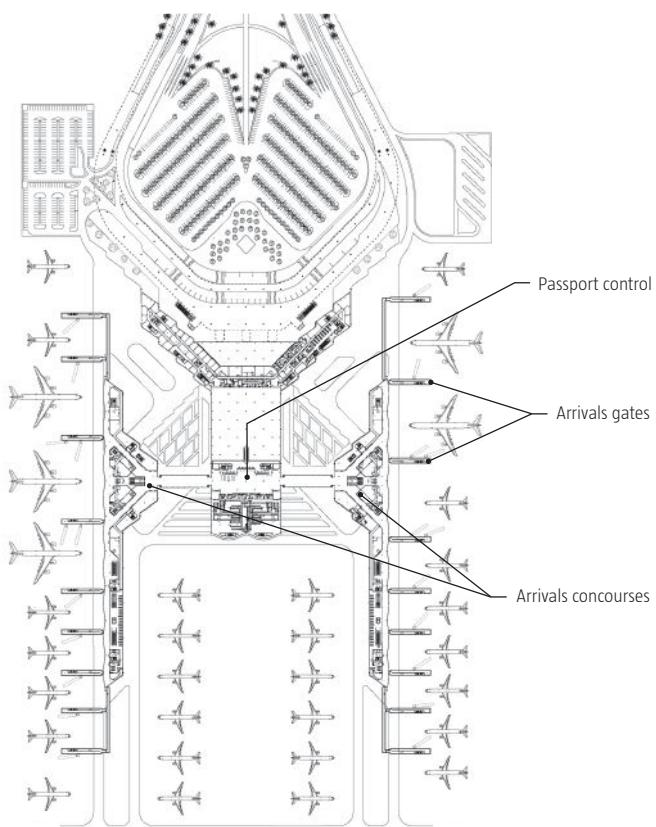
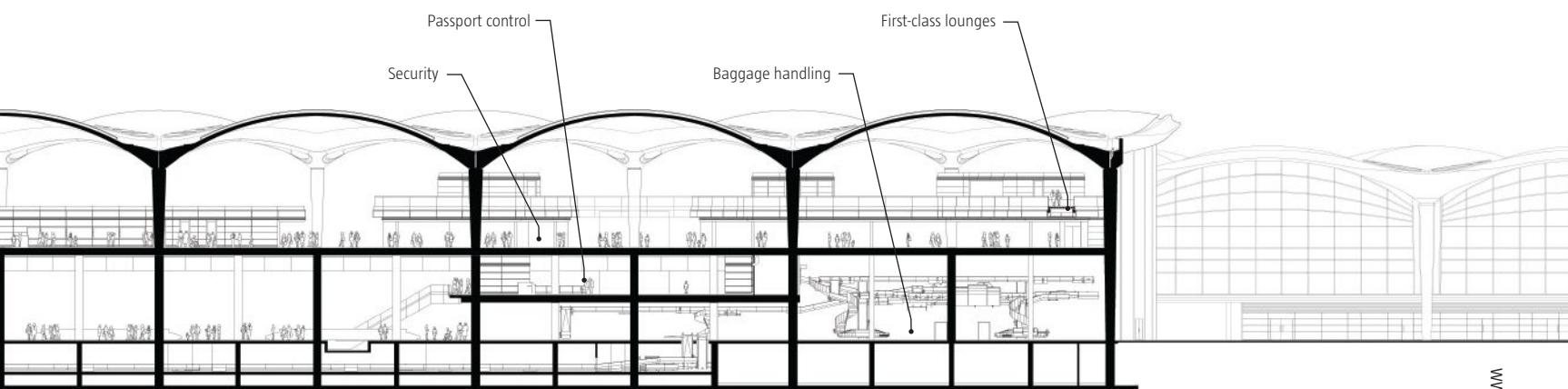
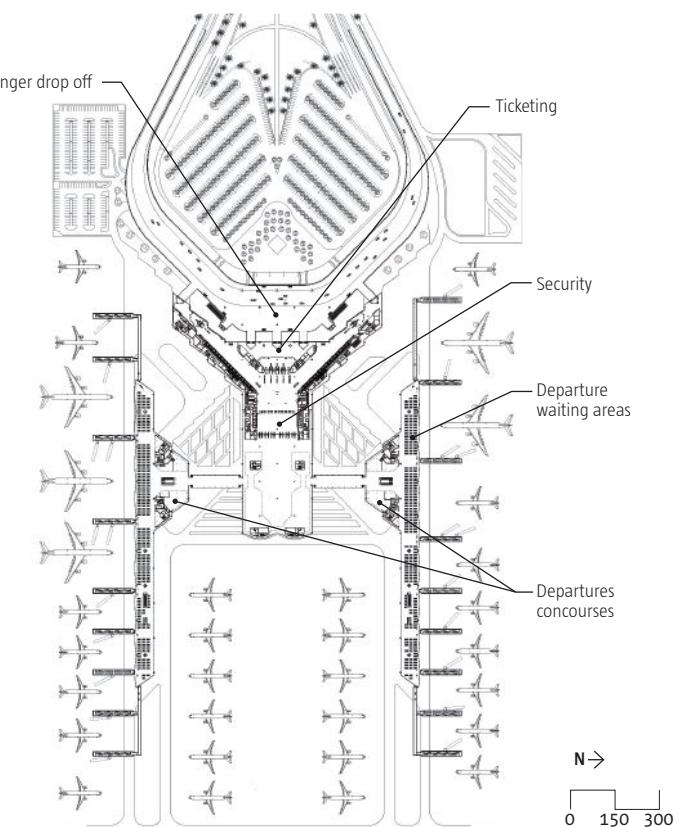
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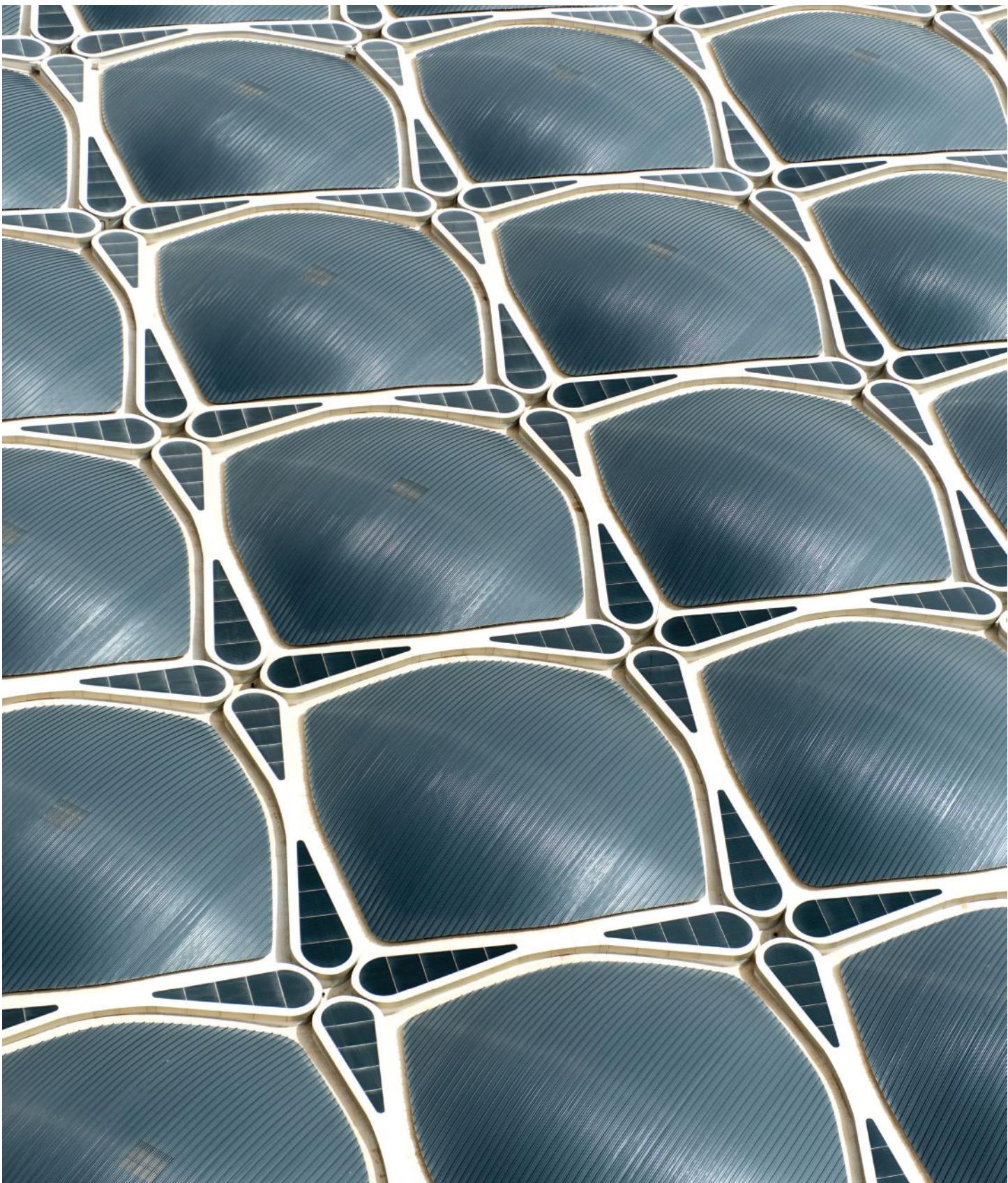


Previous spread

- 1 Deep overhangs of the vaulted, concrete roof structure shade the glazed curtainwall that wraps the passenger drop-off and pick-up areas. This shading, combined with the thermal mass of the concrete structure, radically reduces energy loads for the building. "The precast concrete roof shells sit on precast X-beams and column heads, which rest on in-situ concrete columns," Parr explains, noting that "the requirement for a fair face surface meant that steel molds had to be designed and fabricated in a way that steel connections would be invisible."
- 2 The interiors are airy, with daylight spilling through the glazed perimeter walls and through louvered skylights in the vaulted ceiling. "We illuminated the interior with indirect sunlight by filtering daylight through split beams at the junctions between the concrete domes—the effect is a little like a desert palm, whose leaves extend and widen from very slender branches close to the trunk," Parr says. The underside of each shallow dome is inscribed with a linear pattern that recalls the fronds of palm leaves, as well as examples from Islamic art.
- 3 At the departure gates, fixed, arced louvers in front of the glass help to further shade the building. For additional energy offset, the air is preconditioned by plants and trees in open courtyards before it is diverted into the handling systems. "The airport's open-air courtyards also incorporate pools, which are lined with dark tiles so that they are highly reflective—they 'bounce' indirect daylight back into the baggage claim areas," Parr says.
- 4 The double-height baggage claim area, which features six carousels, is located on the ground floor. The space serves the airport's current 3 million passengers annually, but it can accommodate the planned six-percent growth per year that will result in a capacity of 12.8 million passengers by 2030.

Ground-Level Plan**West–East Section**

Second-Level Plan**Third-Level Plan**



Above: To combat the intense heat of the Jordanian summers, the architects capped the exterior surface of the precast concrete domes with a metal cladding that serves as a heat shield. "The metal standing-seam roof is raised above the concrete domes to form a cavity for air to vent any possible buildup of heat," Parr explains.

Opposite: The raw interior surfaces of the concrete domes are left exposed, and the center of each is inscribed with a linear pattern. That pattern is echoed in the frit of the glass in each skylight. "We used body-tinted glass to carefully control the amount of light transmitted," Parr says, and "a linear frit on the glass creates a play of light and shade internally, while combating glare."



CTA Morgan Station

Project CTA Morgan Station, Chicago

Client Chicago Department of Transportation, Division of Engineering

Architect Ross Barney Architects, Chicago—Carol Ross Barney, FAIA, John Fried, AIA, Ryan Giblin, AIA, Monica Chadha, Assoc. AIA, Kim Sagami, Assoc. AIA, Sean Schrader, Assoc. AIA, Steve Rohr, AIA, Sung-Joon Kim, Assoc. AIA, Craig Hamilton, Assoc. AIA, Jonathan Graves, Assoc. AIA, Jonathan Wlodaver

Prime Consultant and Transportation, Structural, and Civil Engineer TranSystems

Mechanical, Electrical, and Communications Engineer OSA Engineers

Construction Engineer/Manager H.W. Lochner
Field Inspection Muller+Muller

General Contractor F.H. Paschen, S.N. Nielsen

Conceptual Structural Design Arup, Chicago

Size 10,885 square feet

Cost \$35 million

Materials and Sources

Adhesives, Coatings, and Sealants BASF basf.com; Dow Corning dowcorning.com; GE ge.com

Ceilings Lamcel Ceilings lamcel.com

Concrete Advance Cast Stone Co.

advancecaststoneonline.com; Prairie Material prairie.com

Edge-Clamped Glass Enclosure System Novum

Structures (structure and glazing) novumstructures.com

Elevators Mid-American Elevator Co.

mid-americanelevator.com

Glass Oldcastle Glass oldcastlebe.com

HVAC Cook, QMark marleymep.com/en/qmark;

Ruskin ruskin.com; Titus titus-hvac.com; Vent Products ventproducts.com

Insulation Dow building.dow.com; Owens Corning owenscorning.com

Lighting Azz azz.com; Big Beam bigbeam.com;

Kenall kenall.com; Lithonia lithonia.com;

Philips lighting.philips.com

Masonry and Stone Cold Spring Granite

coldspringgranite.com; Elgin Butler Co. elginbutler.com

Metals Atlantic Products (gap fillers), Boom Edam

(rotogates) boonedam.us; Cabworks (kiosks and gap fillers) cabworks.com; Hayward Baker (micropiles)

haywardbaker.com; Lockport Steel/Binzel (architectural metals fabrication) lockportsteel.com, binzelindustries.com; Precision Metals & Hardware (steel doors);

Tefft Bridge & Iron (structural steel) tbiron.com;

US Architectural Glass & Metal (perforated panels, guardrails, handrails, glazed window wall system,

stairs, decking) usaglassandmetal.com; Western Remac (structural steel transit panels) westernremac.com; W.E.B. Production & Fabricating (structural steel, track access platforms) webproductionandfabricating.com; Whited Brothers (flashing/gutters)

Paints and Finishes Sherwin-Williams sherwin-williams.com

Plumbing and Water System Charlotte Pipe charlottepipe.com

Roofing and Translucent Canopies Duo-Gard duo-gard.com

Site and Landscape Products Central Sod Farms centralsod.com; Poul's pouls.com; Victor Stanley victorstanley.com

Wayfinding Western Remac westernremac.com

Queen Alia International Airport

Project Queen Alia International Airport, Amman, Jordan

Client Mawared (National Resources Investment and Development Corp.) (concept design); The Hashemite Kingdom of Jordan Ministry of Transport (scheme design); Airport International Group P.S.C., Joannou & Paraskevaides (overseas), J&P-AVAX (detail design)

Architect Foster + Partners, London—Norman Foster, Hon. FAIA, Mouzhan Majidi, AIA, Darryn Holder (all phases); Huw Thomas, Richard Hawkins, Michael Gentz, John Ball, Riko Sibbe, Tie Fan, Gunnar Dittrich, Young Wei-Yang Chiu, Zheng Yu, William Walshe, Joyce Wang (concept design); Huw Thomas, Jonathan Parr, Riko

Sibbe, Gunnar Dittrich, Irene Wong, Sang-kil Park, Alicja Kiszcuk, Maria de la Guardia, Coco Cugat, Andres Flores, Carol Aoun, Asa Nilsson, Christoph Vogl,

Sebastian Gmelin, Petr Stefek, Christopher Gresham, Wiena Wang, Tessa Derry, Martin Lörger, Takehiko Iseki, Henry Suryo, Juan Frigerio, David Yang, Ellen Haukas,

Heather Moore, Jay Shah, Katie Wu, Maria Szelmeczka, Sabah Ashiq, Siri Stromme Johansen, Sophie Deheegher, Laura Silva Dona (scheme design); Huw Thomas,

Jonathan Parr, Tie Fan, Omar Al Omari, Maher Matar, Niall Starling, Katja Martini, Irene Wong, Anna Kowal, Alicja Kiszcuk, Christoph Vogl, Christopher Gresham, Birgit Schoenbrodt, Piotr Ehrenhalt, Sandra Debbas, Katrin Hass, Bettina Richter, Tobias Schnur, Eduard Petriu, Oxana Krause, Susanne Bellinghausen, Marta Gonzalez, Stefanie Arnold, Yezan Bilbeisi (detail design);

Jonathan Parr, Tie Fan, Omar Al Omari, Maher Matar, Michele Pecoraro, Seif El Din, Katja Martini, Irene Wong, Anna Kowal, Alicja Kiszcuk, Christoph Vogl, Piotr Ehrenhalt,

Sandra Debbas, Marina Cisneros, Anna Perity (aesthetic supervision of production information & construction)

Airport Consultant NACO

Structural and Climate Engineer Buro Happold

Quantity Surveyor Davis Langdon

Local Architects Maisam Dar Al-Omran JV

Airport Systems & BHS ADPi

Structure and MEP Zuhair Fayed Partnership

Civil and Landscape Consultant Dar Al-Handasah

Acoustics Rahe Kraft, Sandy Brown

Lighting World of Lights, iGuzzini

Fire Exova Warrington

Carpet Design Hana Rihani Huber

Size 116,000 square meters (1,248,613 square feet)

Cost \$850 million

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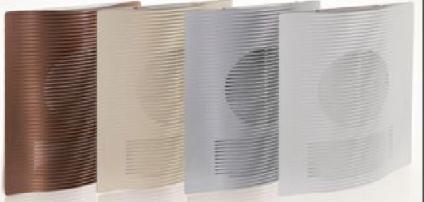
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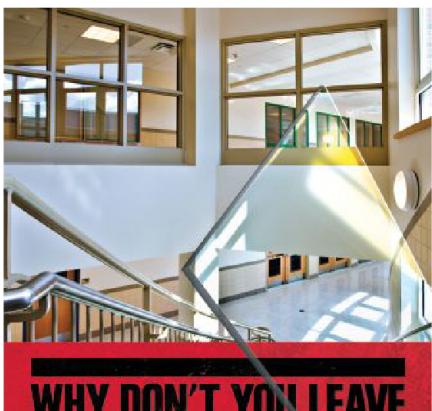
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Stanley Saitowitz
Jorge Silvetti

1992 P/A AWARD CITATION

Revisiting a Museum

THE UNIVERSITY OF MINNESOTA'S WEISMAN ART MUSEUM SHOWS HOW FRANK GEHRY'S WORK HAS CHANGED AS HE ADDED TO HIS OWN DESIGN.

Text by **Thomas Fisher, Assoc. AIA**

TO SEE HOW the work of Frank Gehry, FAIA, has evolved, look no further than the 2011 addition to his 1993 Weisman Art Museum, the latter of which won a citation in the 1992 P/A Awards program. The original building has four brick-clad, skylit galleries standing on top of a parking garage, which are entered from a road along the Mississippi River. The galleries, store, and offices overlooking the river and adjacent bridge are wrapped in a stainless steel façade of Cubist-like shapes that recall the fractured face of the cliff below, with the hand-drawn construction documents laying out each piece of the metal skin like dressmaker's patterns.

The addition, which Gehry's office completed in partnership with HGA, extends the 1993 building in three directions, with new brick-clad galleries perched on two sides, and a new Target Studio for Creative Collaboration

facing a widened pedestrian walkway behind an undulating cowling and beneath a flowing stainless steel canopy. The steel props holding up that canopy and cowling echo those backing up the original façade, bringing to mind the false-front movie sets of Gehry's home of Southern California. But the new stainless steel elements demonstrate the fluidity possible with the software pioneered by Gehry's office.

When lauding the original museum building, the awards jury admired the relationship of the animated metal façade and the boxlike brick galleries. "It's beautiful," said juror Wolf Prix, Hon. FAIA, "to see how a loft mutates into a mask." That the "mask" has continued to "mutate" decades later makes this an extraordinary example of how an architect can comment on his own work.

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Empire State Building Company

Empire State Building sustainability goals

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Lutron contributions toward overall goals

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** Estimates based on Lutron controls installed in ESB pre-built tenant space. Payback claims assume 65% reduction in energy costs and energy rates of 22 cents per kWh. Actual payback terms may vary.

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